HOGG

History of Geology Group

Newsletter 34
September 2008

Front and back covers

'Rotunda Museum and Cliff Bridge, Lithograph after H B Carter
, Courtesy of Scarborough Museums Trust'

Inset: W, Tindall. "View of the cast iron bridge and museum, Scarborough" lithograph by C. Hullmandel circa 1840.,

The Museum is nearly opposite the Aquarium. It is a rotunda, of the Roman Doric order, 374 feet in its external diameter, and 50 feet high. On the basement are the library, keeper's room, and lavatory; and the principal room, which is 35 feet high, is approached by a spiral staircase. This room is lighted from the dome. The cornice that surrounds the building has scarcely its equal; it was taken from the Theatre Marcellus, at Rome. The windows, designed more for the admission of air than light, are taken from the temple of the god Ridiculo, at Rome. The staircase to the gallery is similar to the one in the library at the Chapter House of York Minster, and the model of both from the same temple. Amongst the varied objects of interest contained herein, is the skeleton of an ancient Briton, 2,000 years old. It was found under a hillock near Gristhorpe; the coffin was perfect, and contained beads and other articles. The Antiquity Room is crowded with curious specimens of mediæval armour, personal ornaments, and domestic appliances of a long past age. In the gallery, is a magnificent and varied display of minerals; whilst in the Geological Room, we find fossils, chiefly from the county and north-east coast.

The Cliff Bridge, which spans the ravine, in which the Aquarium is built, and leads from St. Nicholas' Cliff to the Spa, is a splendid iron structure, 414 feet long and 13 feet wide, whilst the height above water mark is 75 feet. The foundation stone was laid in 1826, and the bridge was opened to the public in 1827. It cost about £9,000. In 1880, the width of the road was increased, and a siding was added for the convenience of persons desiring only to walk between the town and the south cliff. The toll is one halfpenny. The prospect from this bridge is at once extensive and varied, and with the walks about the Spa, a picture is constituted which is not often equalled, and seldom excelled.

Adapted from Bulmer's History and Directory of North Yorkshire (1890)

(description taken from:

http://www.genuki.org.uk/big/eng/YKS/NRY/Scarborough/Scarborough90.html

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with due acknowledgement)

The HOGG AGM 2008 will be held at the Rotunda, on the 18th October

HOGG Elections to Committee

Following the changes agreed by the Committee to the HOGG electoral procedure, there was a call in the previous HOGG newsletter (June 2008) for candidates to stand for election to the committee. We are now publishing a list of people who are standing to serve on the Committee for 2008-2009.

Re-standing are:

Alan Bowden (Currently HOGG Chair)
Dick Moody (Currently HOGG Vice Chair)
Leucha Veneer (Currently HOGG Acting Secretary)
Beris Cox (Currently HOGG Treasurer)
David Earle (ordinary committee member)
Hugh Torrens (ordinary committee member)
Nina Morgan (ordinary committee member)

Standing down this year are:

Peter Tandy (Currently HOGG Newsletter editor)
Anne O'Connor (formerly HOGG Secretary)
Nic Bilham (ordinary committee member)

New Candidates:

Tony Brook

In the event that there are more candidates than places available, an election by the membership will be arranged. Tenure is for 3 years initially as an ordinary member, with the option of another 3 years in an officer post. Candidates will be ratified at the AGM (in October this year) and will take up positions from the 1st of January 2009.

Diary of Future HOGG Events
The HOGG Committee has set an ambitious provisional agenda of meetings for the future. More details will be given of each meeting nearer the date, but so far the provisional diary is:

2008

17th-19th October. Smith, Phillips & Rotunda meeting, (Scarborough)

2009 Wednesday 8th April.HOGG Open Meeting , (see call for papers in this issue)
Field trip to Liverpool (in conjunction with the Geologists' Association?) - Summer
18th NovemberHistory of Military Hydrogeology, Burlington House

2010 (Provisional)

Literature & Geology
Geology & Provincial Societies

Other topics may include:

History of the Philosophy of Geology, the History of Mineralogy, something on Collections Lost and Found, History of Igneous Petrology

If members have any additional ideas for meetings (or field excursions) the Committee would be pleased to hear of them.

HOGG OPEN MEETING

Call for Papers

HOGG is presenting another of its successful un-themed Open Meetings on Wednesday 8th April 2009, at Burlington House, Piccadilly, London. Papers on any subject connected with the history of geology can be presented.

If you would like to present a paper, please contact the convenor, Anthony Brook at anthony.brook27@btinternet.com **by 30th November 2008**, giving your name and the title of your paper. An abstract (including some illustrations if necessary) of a maximum of 500 words will be required (as a Word .doc attachment) by January 31st 2009

Above **Figure 1**.
Biddulph Grange, Staffordshire, Day III section from the west.

Right **Figure 2**. The gallery at Biddulph Grange

The gallery sets out geological evidence in its walls for the six days of creation of the Earth and was probably constructed at about the time of the publication of the Origin of Species in opposition to the emerging Darwinian views.

Little literature has come to light about this gallery although it is likely that it would have been visited and commented upon somewhere as it contained fantastic specimens including marine vertebrate remains, adult mammoth remains etc.

Does anyone out there know anything about this gallery or know where we might look to find any accounts of visits or reviews?

Please pass this query on to anyone you think might be able to help and ask them to contact me if they know of any useful information.

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Worth a visit...?

Sloane Printed Books Project

The British Library in association with the Wellcome Trust Centre for the History of Medicine at UCL announces the launch of the Sloane Printed Books Project.

Venue: The British Library Conference Centre 96 Euston Road, London NW1 2DB,
Date: 15 October 2008: 17.30 - 20.00

The Sloane Printed Books Project has created an online catalogue which lists books which belonged to Sir Hans Sloane (1660-1753), whose collections were one of the foundation collections of the British Museum.
Bibliographical records are enhanced with Sloane's own numbers or other identifying marks, and with information about previous owners. The catalogue can be used in many different ways, including identifying individual books from his library, displaying a range of items in the order in which Sloane organised them, or searching for the previous owners of books in Sloane's library.

Presentations on the historical background to Sloane's book collection will be followed by a demonstration of the online catalogue and an opportunity to search its content.

Programme

17.30. Welcome and opening remarks Kristian Jensen, Acting Head of British Collections, British Library

17.40. Collecting information and advancing medicine in the time of Sir Hans Sloane, Professor

Hal Cook, Wellcome Trust Centre for the History of Medicine, UCL

18.00. Sir Hans Sloane and the collection of knowledge, Arthur MacGregor, Ashmolean Museum

18.20. Sir Hans Sloane, founder of the British Museum Library, Giles Mandelbrote, Early Printed Collections, British Library

18.40. An Introduction to the Sloane Printed, Books Catalogue, Alison Walker, Lead Researcher, Sloane Printed Books Project

19.00. Questions and discussion

19.15. Drinks reception

Attendance is free, but please register your name with Teresa Harrington at the British Library <teresa.harrington@bl.uk>

8th International Mining History Congress

Call for Papers

Organised under the auspices of the University of Exeter in Cornwall and Geevor Mining Museum

12 - 15 June 2009 - The Penventon Park Hotel, Redruth, Cornwall, UK

The congress seeks papers on all aspects of mining history, for example, socio-economic, technological, archaeological, geological, and health and safety perspectives, across all time periods.

If you are interested in presenting a paper, please can you contact Dr Peter Claughton at p.f.claughton@ex.ac.uk with a title and abstract of no more than 250 words by 1st December 2008. You will also need to complete a pre-registration form.

Details at http://www.huss.ex.ac.uk/history/imhc/index.php

Martin Rudwick wins Wegmann Medal

Professor Martin Rudwick (University of Cambridge) has been awarded the Prix Wegmann of the Société Géologique de France. The medal, which commemorates the Swiss geologist Èugene Wegmann (1896-1982) is given for work on the history of geology.

Do you have any unwanted or undiscovered geological archives?

Recently, a letter with historical geological connections was found, in a second-hand book, being used as a bookmark. HOGG is concerned that there may be other geological archival items which may be lost to posterity because their importance is not understood, if they are not known about and potentially offered a home. HOGG, through its parent body the Geological Society, may be able to act as a repository for these, if they are not too bulky.

We would thus like you to tell us if you currently look after anything with historical geological connections, and which you feel HOGG could eventually look after for posterity. These may be letters, newspaper articles (relating to specific people or events rather than just general), original notebooks, sketchbooks, maps, awards (certificates or medals), or anything which relates to a specific person or event. We are not especially interested in individual published books, and even less so in complete libraries, simply because they were owned at some point by someone with geological connections, unless there is a very specific reason why such items are seen to be different (though we can look at all cases).

If you had ancestors who were geologists, or who had connections with geologists or historians of geology, or if you yourself were a geologist, and you think you may have items of potential interest, please would you contact Leucha Veneer (Acting HOGG Secretary) at Division of HPS, Department of Philosophy, University of Leeds, Leeds LS2 9JT or by e-mail at: phllv@leeds.ac.uk, explaining what you think you have.

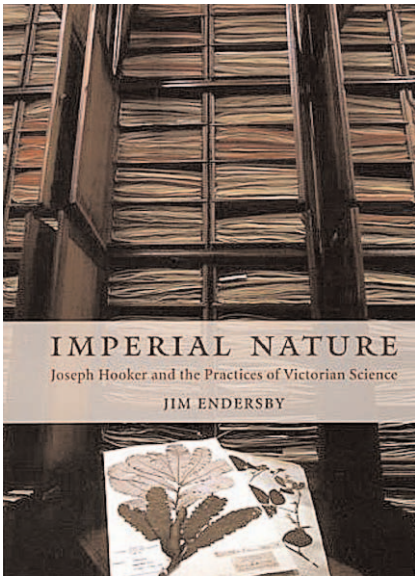
PLEASE do not send any items at this stage!

For your bookshelf...?

Linnaeus, Genius of Uppsala: Helena Harnesk ; translated by Skans Victoria Airey,. Uppsala : Hallgren & Fallgren, 2007, pp121. ISBN: 978-91-7382-825-3
Carl Linnaeus lived & worked in Uppsala for the greater part of his life. He arrived in 1728 to register at the university and here he died fifty years later, a world famous professor.
The environment in which Linnaeus produced his great works has seldom been described in reality. This informative and simply written book, however, allows eighteenth century Uppsala to emerge, and will delight enquiring minds of all ages. We discover his sharp faculties of observation, talent for system and order, and unlimited capacity for work. We learn, too, of the university institutions, conflicts between town and gown, and the farming activities of Uppsala's eighteenth century inhabitants, not least professors' households - all of which raise questions as to the similarities and differences between academic life here and at say, Leiden or Cambridge at the same period.
There is a wealth of material to guide those who are lucky enough to visit Uppsala and see for themselves, but also much for armchair readers wherever they may be, and for those who want to learn more about the man and the world of his time.

Ruggero Giuseppe Boscovich. **un profesore gesuita all'Universitá di Pavia (1764-1768)**. Luciano Agnes. Milano : Cisalpino, 2006. pp.187, ISBN:88-3232-6050-X (In Italian)

Imperial nature: **Joseph Hooker and the practices of Victorian science**. Jim Endersby. Chicago : University of Chicago Press, 2008. pp.429, ISBN-13: 978-0-226-20791-9



Joseph Dalton Hooker (1817-1911) was an internationally renowned botanist, a close friend and early supporter of Charles Darwin, and one of the first - and most successful - British men of science to become a full time professional. He was also, Jim Endersby argues, the perfect embodiment of Victorian science. A vivid picture of the complex interrelationships of scientific work and scientific ideas, Imperial Nature gracefully uses one individual's career to illustrate the changing world of science in the Victorian era.

By analysing Hooker's career, Endersby offers vivid insights into the everyday activities of nineteenth-century naturalists, considering matters as diverse as botanical illustration and microscopy, classification, and specimen transportation and storage, to reveal what naturalists actually did, how they earned a living, and what drove their scientific theories. What emerges is a rare glimpse of Victorian scientific practices in action. By focussing on science's material practices and one of its foremost practitioners, Endersby ably links concerns about empire, professionalism, and philosophical practices to the forging of a nineteenth-century scientific identity.

"Airchie Oliver's a hunder an'a half!": 150 years of Hawick Archaeological Society (1856 - 2006) and 100 years of Hawick Museum (1906-2006). [Jean Muir,]Hawick : Scott & Paterson Ltd, 2006.pp 71. ISBN: 0-9518647-3-4

Venables, Dixon and the Figured Specimens

Anthony Brook

It is curious how the mysteries of history, those aggravating loose ends which so annoy historians of geology, resolve themselves. Sussex geology has its fair share. This is a case-study of how much luck and serendipity play in bringing together two disparate sources, many years apart, to determine a documentary dilemma.

In June 1992, the journal Tertiary Research published the Martin Venables memorial issue (**Figure 3**). One of these commemorative articles, by David Bone, provided extracts from the Venables Notebooks, which he characterised thus: 'the 4 surviving notebooks provide fascinating insight into the world of the amateur Tertiary geologist of the 1930's-1940's'. He goes on to say that: 'Other notes record the opening of the Geological Survey in South Kensington, and the discovery of material from the collection of Frederick Dixon, the Sussex geologist, and used to illustrate 'The Geology of Sussex' (Dixon 1850)'. It is that discovery of Dixon material that directly concerns us, so the entries from the Venables Notebooks for the specific dates in October-December 1937 are herewith reproduced. Venables called on Mrs Wakefield, Dixon's great-niece, at Hespera Cottage, Storrington, on 1 November 1937, and stumbled across 5 of the figured specimens from Dixon's magnificent volume amongst oddments in a drawer of an exhibition cabinet. He returned a fortnight later, and 'packed up the figured specimens for transit to the B.M.'. All very commendable, except that, unfortunately, Venables omits to denominate these figured specimens, except in general terms. There the matter rested, unresolved.

TERTIARY RESEARCH 13 (June 1992) p. 65

Martin Venables Memorial Issue

Excerpts from Venables's Notebooks, October – December 1937

OCTOBER 23rd 1937
"This morning I received a letter from Mr Caldecott of Amberley .... It contained the startling news that he had met Dr Frederick Dixon's descendant and that she was in possession of a remnant of his collection which she was willing to sell."

NOVEMBER 1st 1937
"Since writing to Mr Caldecott, I have been in further postal and telephonic communication with him, arranging for my visit to Dr Dixon's relative. Today I caught the .... train .... to Amberley .... and went to his [Mr Caldecott] house. .... He also showed me various papers he had from Dixon's relative, Mrs Wakefield. They include the watercolour original of the plate of urns which forms the frontispiece of the "*Geology of Sussex*", the Agate plates, and a printers proof of the text figure of the vertebrae of *Palaeophis* and *Python Sebae* [Dixon, 1850 p.213]. .... We left for Storrington .... Arrived at Hespera Cottage, I was introduced to Mrs Wakefield and proceeded at once to view the collection which is in a 6-drawer cabinet. Most of it was the usual accumulation of oddments .... I found, however, three of the figured Agates and 2 of the figured Crustaceans. There were also fishes from Monte Bolca and a large *Carcharodon* tooth. Whilst I was on these things my friend bought the papers and the [word illegible] and a Roman vase from Mrs Wakefield for £4. She also showed me a fine portrait of Dixon, and I could at once see the family likeness; there was also a smaller portrait in amateurish hand .... Mrs Wakefield offered the large one to me, but I thought a museum should have first refusal. Mr Caldecott valued it at £5. .... I promised to broach the subject of sale with the British Museum authorities."

NOVEMBER 17th 1937
".... went to Amberley .... and there Mr & Mrs Caldecott met us and drove us to Storrington .... whilst the others were engaged in talk with Mrs Wakefield & Miss Curtis, I packed up the figured specimens for transit to the B.M."

DECEMBER 8th 1937
".... Arriving at Mrs Wakefield's, I heard from her the regrettable news that the portrait of Dixon which she sent on approval to the Geol. Soc. had arrived with the glass smashed and the picture itself scratched. I had taken a box, brown paper and string with me and was soon packing all the collection .... I brought away with me some news cuttings about Dixon, his autograph and a letter from Owen."

Figure 3

Fast forward to the spring of 2008, when, in preparing for my Public Lecture on 'Frederick Dixon: His Life and Legacy', in the Local Heroes series, on 4 April in the Worthing Library Lecture Theatre, I thought it most advisable to look through Worthing Library's file of newspapers/magazine cuttings on Frederick Dixon. That is where I came across the article by Martin Venables, in his regular weekly column entitled Selborne Notes in the West Sussex Gazette for 28 August 1969, with the heading 'Great Sussex Geologist', by which, of course, he meant Frederick Dixon. This article is reproduced here in full, for the record (**Figure 4**).

The first three paragraphs are of a general nature, emphasising Venables' empathetic affinity with Dixon and his researches. The rest is far more significant, because it reiterates, after a gap of more than 30 years, events of the late autumn of 1937, with astonishing detail and exactness. The penultimate paragraph says it all, and, moreover, specifies 3 of the figured specimens---Plate 38, figs 3,8 and 12, all parts of crustaceans, as illustrated (**Figure 5**). Venables continues; 'I told Mrs Wakefield that those 3 specimens should be in the B.M. She asked me to take them up, and there was great excitement among the authorities there at the sight of those things which had always

WEST SUSSEX GAZETTE

Thursday 28 August, 1969

Selborne Notes

Great Sussex Geologist

When I heard, some time ago, that an exhibit commemorating the life work of the great Sussex geologist, Dr Frederick Dixon, was to be set up in Worthing Museum, my thoughts ran back over nearly half a century, and my mind was crowded with memories of unforgettable incidents in my own life as a palaeontologist.

My father, who had always taken a lively interest in my boyhood pursuits, quickly realised, when my interest in fossils manifested itself, that I had finally found my niche, after all the false starts, that I was now set on my course, and that this was no mere evanescent "nine day wonder". Accordingly, one Christmas when I was barely out of my 'teens, my father gave me a copy of Dr Dixon's "Geology of Sussex" to help and encourage me in my studies. The avidity with which I mentally devoured this gift can hardly be guessed. [Dixon and Jones, 1878] At last I was able to see where I stood in relation to the study, and I found that I had already contributed to the stock of accumulated knowledge. [Proc. Geol. Assoc. 40 (1929) 41-51]

Dr Dixon had died in 1849, years before my father was born, yet his book was so up to date at the time of publication that it is no exaggeration to say that it is still a standard of reference, eagerly sought in secondhand bookshops. 70 years elapsed between the time when Dixon's hammer was laid by, and the date of my own appearance in the field of research, 70 wasted years, during which no one did anything. Small wonder then that, ever since I acquired the "Geology of Sussex", I have been acutely conscious of the fact that, in my researches on the Tertiary deposits of West Sussex, I have been walking ground hallowed to the memory of Dixon, in whose footsteps I have been treading all the time.

Years went by, and then one day in the mid –1930's, I received a letter from a fellow member of the Natural Science and Archaeological Society of Littlehampton; my correspondent had lately made the acquaintance of a Mrs Wakefield, of Storrington, greatniece of Dr Frederick Dixon. She had some relics of her great uncle, and I was invited to lunch with the writer at his home in Amberley. During lunch, my host told me that Mrs Wakefield had a copy of the "Geology of Sussex", and he asked me its value. Little did I realise he intended to buy it at my valuation; and still less did I then know that I was talking to an expert valuer for one of the biggest auction companies in London!

After lunch, my host took me by car to call on Mrs Wakefield, a truly charming old lady, who, I believe, had been responsible for flower arrangements to the Royal Household in Queen Victoria's reign. Mrs Wakefield showed me two small cabinets of drawers containing a heterogeous assortment of odd minerals and fossils, a sort of schoolboy collection, which had belonged to her great uncle. I knew that Dr Dixon's vast collection had been acquired, after his death, by the British Museum (Natural History) for the sum of 500 guineas, the equivalent today of about £3,000.

Imagine my astonishment when, amongst all the oddments, I suddenly recognised something as familiar to me as the back of my own hand! This was a fossil crustacean, which I instantly knew as a specimen which is illustrated in Dixon's great work. To come across what is known in scientific circles as a "figured specimen" is a rare and exhilarating experience, and I continued my search with renewed zest and zeal. Two further figured specimens of crustacea turned up that afternoon, both immediately recognisable to me as the originals of illustrations in the "Geology of Sussex". It was indeed a "red letter day" for me. Any reader lucky enough to possess a copy of Dr Dixon's great work will find the figures of these 3 specimens on Tab. XXXVIII, numbers 3, 8 and 12.

I told Mrs Wakefield that these 3 specimens should be with the rest of her great uncle's collection in the British Museum. She asked me to take them up, and there was great excitement amongst the authorities there at the sight of those things which had always been missing from the Dixon Collection. They asked me to write on their behalf making an appropriate offer for the fossils, and this was accepted by Mrs Wakefield.

Figure 4

Frederick Dixon

The Geology and Fossils of the Cretaceous and Tertiary Formations of Sussex 1850

A. Plate 38 (double-page): figs. 3, 8 and 12

B. Description of the Plates

Page xv:

Fig. 3 The fore-part of the carapace and a portion of the claw of *Palaestacus Dixoni*

Fig. 8 Part of the carapace of a Crustacean

Fig. 12 Five legs of the same side of a Grapsiform Brachyurous Crustacean

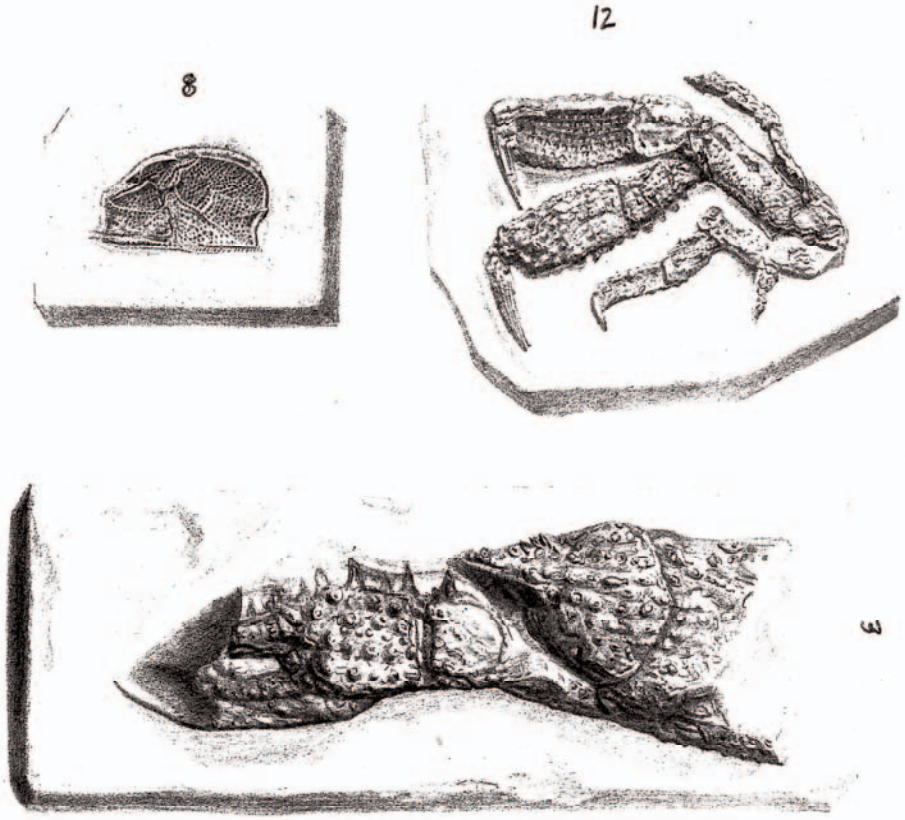


Figure 5

been missing from the Dixon Collection'. Mrs Wakefield accepted an appropriate offer for the fossils, and they were successfully transferred to London.

First of all, it is quite remarkable that these precious figured specimens should have survived for so long, apparently undamaged, in a cabinet drawer in a village cottage, awaiting discovery by a competent expert, and then safe transfer to a Museum, where they would receive due care and attention. It would also indicate that the Dixon Collection of fossils was still held as a 'personal' collection in the late pre-war period; and also that the resolution of historical issues in geology can occur at any time, quite unexpectedly!

Final thought: in 1937 Venables mentioned 'figured Agates': what happened to them, I wonder?

A Blue Plaque for James Smithson

Heather Ewing

On September 25, 2008, English Heritage will unveil a blue plaque (**Figure 6**) to James Smithson, the English scientist whose bequest established the Smithsonian Institution. The plaque is to be located at No. 9 Bentinck Street, in central London, on the house where in 1826 Smithson wrote his exceptional will, leaving his fortune to the United States of America, a place he had never visited, to found at Washington "an establishment for the increase and diffusion of knowledge."

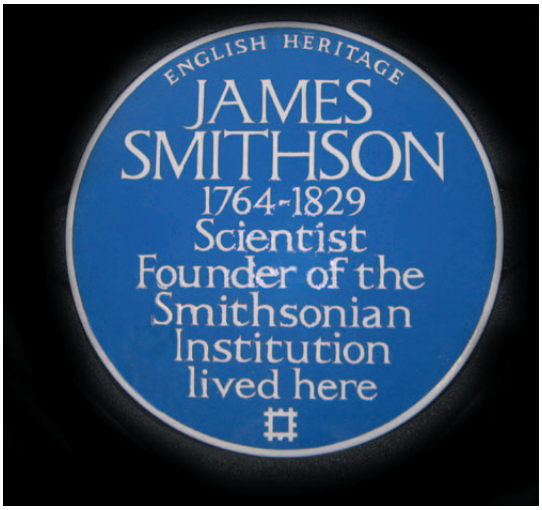


Figure 6

Smithson's gift has grown to encompass nineteen museums, the National Zoo, and dozens of research centres, and is the largest and one of the most famous museum and research complexes in the world. And yet Smithson himself has been somewhat forgotten. The illegitimate son of the first Duke of Northumberland, he was a talented chemist and mineralogist who became a member of the Royal Society at age 22 and was highly regarded for his work with the blowpipe. He spent much of his life abroad amidst the scientific circles of Europe, and published some twenty-seven known papers, including investigations of zeolites, ulmin, and tabasheer. The mineral smithsonite is named in his honour. His mineral collection, which numbered some 8,000-10,000 specimens and included a valuable suite of meteorites, was considered one of the finest in the U.S. when it arrived in the 1830s along with the bequest; but it was unfortunately lost, along with Smithson's correspondence and other belongings, in a fire in 1865 at the Smithsonian. This new blue plaque offers an opportunity to remember James Smithson and the spirit of his gift.

The Blue Plaque scheme has been in existence for more than 140 years; it has been administered by English Heritage since 1986. The process is a simple but lengthy one (I submitted the application for Smithson in 2000). If English Heritage gives initial approval to the application, research is then conducted to find an extant historic property connected with the figure (there are no longer any plaques made that read "on this site lived…"); and then permission for the placement of the plaque is sought from local councils and the owners.

A brief report on the ceremony itself will follow in January.

Heather Ewing, formerly an architectural historian at the Smithsonian Institution, is the author of **The Lost World of James Smithson: Science, Revolution, and the Birth of the Smithsonian** (Bloomsbury, 2007). (see review below)

Book review

The lost world of James Smithson. Science, revolution, and the birth of the Smithsonian, by Heather Ewing. Bloomsbury, 2007, 432 p., $29.95, hardcover (ISBN-10 1-59691-029-1)

The Smithsonian Institution, one of the greatest museum and research complexes in the world, traces its origins back to a secondary clause in the will of James Smithson (née James Louis Macie), an Englishman who had never set foot in the United States. What do we know of this enigmatic benefactor who left his entire fortune to found in Washington "an establishment for the increase and diffusion of knowledge among men?"

Up till now, Smithson has remained largely a shadowy figure, for the fire of January 24,1865 that ravaged the Smithsonian Castle completely destroyed all his writings-some 200 unpublished papers, the records of his laboratory experiments, and his scientific correspondence. Also consumed in the flames were his personal effects, including his extensive mineral collection, which included "a valuable suite of meteoric stones, which appear to be specimens of most of the meteorites which have fallen in Europe during several centuries (p. 184)."

In her new book, Heather Ewing gives us the fullest picture to date of James Smithson (**Figure 7**). She accomplished this by such means as combing through numerous libraries and archives in Britain, Europe, and the US; by examining the papers and diaries of his relatives and colleagues; by studying the marginalia he scribbled in his books; and by going through his existing bank records, to glean information about his numerous travels.

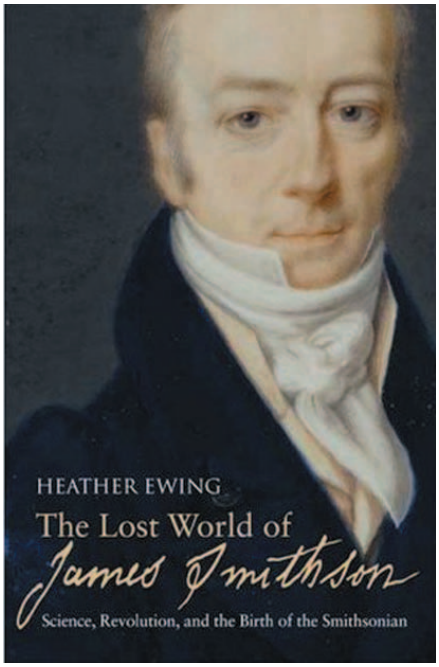


Figure 7

The picture of Smithson that emerges is nothing short of remarkable: "[A] noble, famous father [Hugh Smithson--later Hugh Percy--the first Duke of Northumberland], a wild, theatrical seductress of a mother, an illegitimate secret birth [his father never formally recognized him], disputed ancestral lands, and untold family lawsuits and countersuits, lasting years (p. 45)."

From the time of his undergraduate years at Oxford, he exhibited enormous exuberance, talent, and ambition. Believing that labour for the increase and diffusion of knowledge constituted man's highest calling, Smithson devoted himself to the study of chemistry, an exciting field in the eighteenth century which held out great hope for the happiness of man and the betterment of society.

Smithson's friends and colleagues form a virtual who's who of European science in the late eighteenth century, including such notables as William Thomson, James Hutton, Henry Cavendish, Humphry Davy, William Hyde Wollaston, Joseph Black, Charles Greville, and Richard Kirwan. He was an early member of the Society for Promoting Natural History and the Coffee House Philosophical Society, and was elected into the Royal Society in 1787; at age twenty-two, he was the Royal Society's youngest member.

Ewing's account of Smithson examines his first scientific tour, a journey in 1784 to Staffa, a remote island in the Hebrides off the west coast of Scotland; his first travels on the Continent; and his Grand Tour of 1791-1797, spent mostly in Paris, Italy, and Germany. He was in Florence when Mt. Vesuvius erupted spectacularly on June 15, 1794. On the next day, a very curious event occurred--following the appearance of a fast-moving white cloud emitting smoke and sparks, several detonations like canon fire were heard; the cloud turned red, and a shower of some 200 small stones (the largest weighing about 3.5 kg) rained down on Cosona, a small town near Siena.

Smithson immediately went there, studied the strange black stones that had been collected, and sent a description of his findings to Cavendish back in London to help spread the word of this remarkable event (unfortunately, this letter is now lost). There was, naturally, wide speculation as to where the stones had come from. Some felt they had been ejected from Vesuvius; others, like William Thomson (who had left Oxford under the cloud of scandal and was now living in Naples), speculated that they had been thrown from a neighbouring Tuscan volcano.

The Siena fall, which was observed by a large number of persons from several European countries, has come to play an important role in the development of the science of meteoritics. Over the next few years, some other notable falls were seen: Wold Cottage, Yorkshire, in 1795; Benares, India, in 1798; and, famously, a shower of nearly 3,000 stones at L'Aigle, Normandy, in 1803. Siena stands at the head of these falls; despite the controversy over the nature of the stones, there was universal agreement that they had indeed fallen from the sky. This initiated a period of transition from skepticism about meteorite falls to the modern view of their acceptance.

Given Smithson's strong interest in mineralogy, it was natural for him to join other members of the scientific community in taking a serious interest in meteorites. Some, like Thomson, Father Ambrogio Soldani, and Abbot Domenico Tata, were directly involved in Siena investigations. Other scientists making important contributions to meteoritics at that time included Edward C. Howard, Jean-Baptiste Biot, Martin Klaproth, and Fleuriau de Bellevue. Smithson's friendship with these investigators would have made it possible for him to obtain specimens from them; it seems likely that his suite of meteorites, “specimens of most of the meteorites which have fallen in Europe during several centuries,” was amassed in this way.

Ewing discusses in detail how Smithson was influenced by the events and ideas of his day. The revolutions and wars that were taking place in Europe affected not only his travels, but his very safety. Although he might have had a playful time with the bumbling undercover French policeman who shadowed him in Strasbourg, he felt his very life was in danger when later imprisoned in Hamburg. He and his friends believed that through the careful accumulation of observation and fact, they could divine natural law. His meticulous work in chemical analysis was firmly rooted in the belief that this was the best way to understand the mineral kingdom.

Ewing's treatment of Smithson's science is thorough, but she carefully avoids a hagiographic approach. She points out that he made no ground-breaking discoveries, published no great scientific tome, and made no lasting mark on how the pursuit of science was conducted. “Time has moved on, science moved forward, and the bit players standing at the margins have begun to recede. Although they commanded the respect and admiration of their colleagues in their day, history has no room for them. Smithson stands for many of them (p. 314).”

Ewing ends her book with an examination of how Smithson came to write his unorthodox will, and the more commonly known details of Richard Rush's trip to London to secure the Smithson money, the debates in Congress over the nature of the new institution, and the role played by Joseph Henry, the Smithsonian's first Secretary, in shaping the multi-faceted Smithsonian into the kind of institution it is today.

Perhaps the most discerning aspect of Ewing's treatment of Smithson is the poignant picture she paints of how he lived in two worlds-the world of patronage and the world of science. Throughout his entire life, Smithson was unable to relinquish a deep-seated need for recognition of the fact that he was the son of the first Duke of Northumberland. Although he lived his life as a well-born

gentleman and patron, he nevertheless felt there was an elite social world that remained forever just beyond his reach. And in the world of science, he found that the gentlemanly circles he was travelling in were giving way to the domain of professional scientists. As Ewing insightfully notes, “He seems to have straddled these two worlds, never able fully to inhabit either (p. 348).”

Ewing's biography of Smithson is superb-it is thoroughly researched, fully documented, sensitively portrayed, and beautifully written. Filling a much-needed gap, it is an important addition to the history of science, institutional history, and eighteenth-century biography.

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Managing Editor, Meteoritics & Planetary Science Journal, The University of Arizona)

Whatever is under the Earth: some comments on a critical period

Bruce Wilcock

In *Whatever is under the Earth*, Professor Gordon Herries Davies has provided a lively and in places entertaining account of the history of the Geological Society.[1] To cover two hundred years in the space he was allotted (about 200,000 words) was a tight assignment. As a historian he has sought to demonstrate general patterns. He accordingly used a broad brush, but some particular aspects of the story have consequently suffered. It may therefore be helpful to comment on some passages in the book that relate to the years1961 [6], during which I was working for the Society as Assistant Secretary and Editor.[2]

There were more positive things to be said about these years than might be inferred from chapters 8 and 9 of the book. What could be done at that time was constrained by lack of funds, but developments nevertheless took place and foundations were then laid that were crucial for the Society's future expansion. It can thus be claimed that the Society's affairs began to recover rather earlier than is indicated by the author. I must immediately add that whatever was achieved then is to be credited to the Officers and Council of the time and not to me: my role was a relatively circumscribed one.

Contrary to the impression given in the book, the Officers under whom I served gave a great deal of their time to the Society and were eager to take it forward: they were duly mindful of the tradition they had inherited but no less aware that those who had created that tradition had been looking forward rather than back over their shoulders. They brought a wide variety of experience to bear. More than a few of them had considerable personal experience of applied geology: I could name five among those under whom I served.[3] One significant indication of wider concerns at that time is given in S. E. Hollingworth's 1962 Anniversary Address, 'Our Society and the Geological Sciences' (which he modestly described as 'mildly provocative').[4] In it he raised many questions, not only about the Society's activities, but also about geological education and research worldwide.

As Herries Davies records, the proposal for an Engineering Group came from an unexpected source.[5] It was nevertheless swiftly brought to fruition (in 1964) by the Officers and Council, with results that were far-reaching for the Society, not least in a substantial increase in the number of Fellows. Herries Davies also refers to the adoption of the Volcanic Studies Group in the same year.[6] The fact that this group came to the Society in the month after its formation indicates that its members were confident from the start that the Group would benefit from the association. It also indicates that there was no hesitation on the Society's part in welcoming them under its roof.

The assertion that contact with the officers was confined to Council meetings[7] is quite incorrect. There were also separate meetings of the Officers (which I attended). Officers, and especially the Secretaries and Treasurer, were frequently in touch, whether in person, in writing, or on the telephone.

A significant development that seems to have escaped Professor Herries Davies was the setting-up by Council of a Policy and Development Subcommittee to make recommendations on general policy and on possible development of the Society's activities. This subcommittee first met in April 1962.[8]

Another development, certainly no less significant, that does not seem to be mentioned in the book is the institution of a preliminary postal ballot, which made it possible for Fellows throughout the world to vote for nominees for vacancies on Council. This procedure was set up in 1963 and took effect for the ballot for vacancies on Council for 1964.[9] Under the terms of the Society's Royal Charter voting had previously been confined to those Fellows attending the AGM. The preliminary ballot, which was followed by a formal vote at the AGM, effectively extended the vote to all Fellows without infringing the Charter.

Also significant, but given only a passing mention in the book, is the general discussion on Society matters at the meeting on 30 October 1963, which gave Fellows the opportunity to express their concerns on a wide range of topics, including Fellowship and Society affairs, external relations, publications and meetings, the library, and finance.[10] Dr P. A. Sabine (Secretary) provided background information about the Society's position at that time and referred to developments that had taken place in recent years in its publications, the library, and in meetings. Dr W. Bullerwell (Treasurer) then spoke about the Society's finances, which were at that time a matter for serious concern. He outlined some measures that might be taken to increase in income in order to maintain and expand activities. In the ensuing discussion 25 Fellows spoke; six written contributions were also received. The ideas put forward included making over the library to some other institution and putting the Quarterly Journal in the hands of a commercial publisher. Other suggestions put forward concerned changes in the Society's organization and in its publication policy, improving communications with the Fellowship at large, and giving more Fellows the opportunity to participate in Society affairs. Another matter of concern was the Society's role in national affairs (including education).

In response, Council pointed out that some of the ideas put forward had in fact already been adopted. It accepted that the Society, although formally the Geological Society of London, was in effect a national and international society. The Publications Committee would endeavour to accept a wider variety of papers, and short papers would not be excluded. Council intended to continue to improve the library, which was a national asset. The Society's committee structure was under review with the aim of giving Council more time to consider policy matters, both internal and external, and it was hoped to make more use of Fellows who were not members of Council. The

election procedure would be reviewed after the new Council had been elected. Other points raised in the discussion were being considered. Finance was throughout the chief factor limiting what could be done. (The Society's committee structure was reorganized at the end of 1963 with the object of delegating to special committees some matters previously considered by Council and to bring the Fellowship more closely in touch with Council work. A list of the Society's representatives on outside bodies was published in March 1964. At that time the Society had twelve representatives on as many committees and other bodies.[11])

The statement that papers submitted for publication were not carefully scrutinized in Council[12] is misleading: the detailed assessment of papers was handled by the Publications Committee and only exceptionally would further examination be called for. Papers were assessed by at least two referees, and many were sent back for revision in the light of the referees' reports. In these matters, as in many others, the Secretaries played an essential role. No less misleading is the assertion in the same paragraph that when Brian Harland, during the time he was a Secretary, was away on fieldwork the Journal was left 'on hold' and scheduled publication dates were allowed to slip. The implication that Harland would have shown such gross disregard for his responsibilities to the Society is a totally unwarranted slur on a man for whom such behaviour would have been quite out of character; and it is equally inconceivable that his fellow-Officers would not have taken prompt action if it had been necessary. None of the Officers should in any case have been engaged in routine editorial work for the Quarterly Journal: this, together with the editing of the Society's other publications, was the responsibility of the Assistant Secretary and Editor.[13] Arthur Greig had brought the schedules under control by December 1960, and it was made abundantly clear to me when I took over that delays in publication were not to be tolerated. The Quarterly Journal was still on schedule when I handed over to my successor in mid-1966.

Although Brian Harland was not (at least to my knowledge) concerned with routine editing for the Quarterly Journal, he made a notable contribution at an altogether higher level as the scientific editor, with Alan Gilbert Smith, of The Phanerozoic Time-scale (published in 1964).[14] This volume, which receives only brief mention in the book, was very much Harland's brainchild. It was an important addition to the geochronological literature. As Herries Davies notes, The Phanerozoic Time-scale had a special significance in being the prototype for the special publications that have since become such a prominent feature of the Society's book list. Harland wrote in his preface to the volume, '. . . it is now [Council's] policy to review from time to time major geological topics and to invite Fellows from many disciplines to co-operate.' (A series of Memoirs had already been initiated in 1958.[15]) The Special Publications now number more than 300. The Phanerozoic Time-scale was in another respect a milestone in having been based on the first official meeting of the Society to be held outside London (in Glasgow, February 1964[16]). Meetings in Birmingham and Swansea followed in 1964 and 1965.[17] The scope of the Society's meetings was now wide, both scientifically and geographically; applied topics were prominent; and meetings were being held in conjunction with other societies or institutions.

Another misstatement that needs to be corrected is the remark that the Society's library then lacked professional expertise.[18] Both Anne Paddick and Joan Green, who succeeded her in 1962, had previous library experience, and we were able to obtain outside advice when it was required (as, for example, on the conservation of archive material). In the library, as elsewhere, lack of funds was, as Herries Davies accepts, the main factor that limited progress at that time.[19] The Society was later able develop its services to Fellows and its publications when its finances were transformed by the receipt of large donations and bequests in 1969, 1975, 1984, and 1990; details are given in the book.[20] It should be mentioned here that although the £270,000 Coke bequest was not received until 1984, the then Treasurer (Dr W. Bullerwell) and Senior Secretary (Dr P. A. Sabine)

had been engaged in discussions with Colonel Coke in 1965–6. These discussions had to be kept secret until Colonel Coke and his daughter had died.[21]

With some hesitation I mention a minor item: the doors that were installed between the Upper Library and what was then the Assistant Secretary's room (now the Fellows' Room). These 'oaken doors' (as Herries Davies somewhat poetically refers to them) are not of any special significance in the Society's history, but they are given some prominence in the book[22] and therefore call for comment. I have to say that I have no recollection of agitating for the replacement of the curtains that previously separated the room in which the editorial assistant and I worked from the Upper Library. Visitors seemed to find the curtains amusing, but the absence of doors did not trouble me. There were, indeed, far more pressing matters with which I was concerned at that time, such as office organization and setting up a system for monitoring the publications _ and it would in any case have been inappropriate to have made a fuss about something of this kind. Oak was chosen for the doors simply because the Ministry of Works required that they should match the existing oak panelling in the room. It would seem that here, as elsewhere, Herries Davies may have been misled.

Of far greater significance for the Society is the matter of additional accommodation, which together with funding was a key factor in the Society's development in that period. Herries Davies's account[23] does scant justice to the lengthy negotiations that took place during a period of many years before the additional space became available in 1966. It was at these meetings that senior representatives of the 'Courtyard societies' discussed the allocation of the space that would become available after the departure of the Royal Society to Carlton House Terrace. The Society's Officers were much involved here, especially in the early 1960s, and much detailed work was done. The statement in the book that 'on 23 November 1966 the Geological Society's Council learned that the Society had been successful in its application for extended accommodation' is misleading. Dr P. A. Sabine (then Senior Secretary) had written to the Secretary of the Royal Society on 17 August 1965 to accept the offer of space which at that time was occupied by the Chemical Society. In doing so he expressed the Officers' disappointment that the Society's requests had not been fully met but recognized that the total space available was less than enough to meet the wishes of all the societies concerned.[24]

As I have indicated above, my object in offering these comments is not to make carping criticisms but to shed further light on a period of which I have personal knowledge. Others may perhaps be able to comment on earlier and later periods.

I am grateful to Dr P. A. Sabine for providing much valuable information and advice and for commenting on draft material.

Notes and references

1 Herries Davies, G. L. (2007) *Whatever is under the Earth: the Geological Society of London 1807 to 2007*. Geological Society, London.

2 I joined the Society in February 1961, took over from Arthur Greig in May of that year (after his retirement), and was with the Society until the end of May 1966. (The title of the post was subsequently changed to 'Executive Secretary'.)

3 Dr W. Bullerwell (Treasurer 1963-71), Chief Geophysicist, Geological Survey and Museum; Mr P. Evans (Treasurer 1947-63), Chief Geologist, Burmah Oil Company; Professor S. E.

Hollingworth (President 1960-2), Professor of Geology at University College London, worked on mineral deposits, hydrogeology and other areas of applied geology; Dr P. A. Sabine (Secretary 1959-66), Chief Petrographer, Geological Survey and Museum; Professor F. W. Shotton (President 1964-6), Professor of Geology, University of Birmingham, engaged in military geology during the Second World War and later as a consultant on water supply and geotechnical questions. (Some of these Officers also served the Society in other capacities at other times.)

[4] Hollingworth, S. E. (1962) Our Society and the geological sciences. Quart. J. geol. Soc. Lond. 118, pp. 455-72. Hollingworth's 1961 Anniversary Address, 'The climatic factor in the geological record' (Quart. J. geol. Soc. Lond. 117, pp.1-21), was also wide-ranging and forward-looking, if in a different sense.

[5] Herries Davies (2007), p.269.

[6] Herries Davies (2007), p.270.

[7] Herries Davies (2007), p.263.

[8] The initial membership of the Policy and Development Subcommittee was: Professor O. M. B. Bulman (President), Mr J. M. Edmonds and Dr P. A. Sabine (Secretaries), Mr P. Evans (Treasurer), Dr H. W. Ball, Professor K. C. Dunham, Professor L. Hawkes, Professor S. E. Hollingworth, and Sir William Pugh. (Report of Council for 1962, Proc. geol. Soc. Lond. No. 1605 (1963), pp.35-6).

[9] Report of Council for 1963. Proc. geol. Soc. Lond. No. 1614 (1964), p.31.

[10] Herries Davies (2007) refers en passant to the meeting in connection with the Society's meeting room (p. 278) but gives no information about the other topics that were discussed. A summary of the main points covered in the presentations by the Officers and in the subsequent discussion was published in Proc. geol. Soc. Lond. 1612 (1964), pp.5-13. The report of the meeting includes a note (p. 8) that a full transcript would be available to Fellows in the Society's library.

[11] A list of Fellows representing the Society on outside bodies appeared in Proc. geol. Soc. Lond. No. 1613 (1964), p.15. At that time the Society had twelve representatives on the same number of outside bodies.

[12] Herries Davies (2007), p.266.

[13] The Society's notes (dated November 1960) for applicants for the post stated that 'the Assistant Secretary and Editor is responsible, under the Council and Officers, for the conduct of the Society's business, including the editing of the publications . . .' This statement, which is hardly more than a paraphrase of the job title, does not exclude the possibility that an Officer might occasionally edit, or even rewrite, material submitted for publication (e.g., by a Foreign Member). This did indeed happen, but would be exceptional.

[14] Harland, W. B., Smith, A. G., and Wilcock, B. (eds) (1964) The Phanerozoic Time-scale: a symposium dedicated to Arthur Holmes. Supplement to Quart. J. geol. Soc. Lond. Geological Society, London. (The Phanerozoic Time-scale was labelled as a supplement to the Quarterly Journal simply because a grant that had contributed towards its costs was earmarked for the Journal; for practical purposes it was nevertheless regarded as a publication in its own right.)

[15] Proc. geol. Soc. Lond. 1615 (1964), pp.61-2.

[16] Geological Society Circular No. 50 (24 October 1956), p.3. The same circular also announced that the Council was prepared to receive brief geological papers for publication in the Proceedings.

[17] Herries Davies (2007), pp.270-1.

[18] Herries Davies (2007), pp.266.

[19] The Treasurers' reports throughout the period under consideration present a gloomy picture of increasing costs and limited income. See, for example, Proc. Geol. Soc. Lond. No. 1596 (1962), p. 60; Proc. Geol. Soc. Lond. No. 1605 (1963), pp. 36-7; Proc. Geol. Soc. Lond. No. 1614 (1964), pp. 32-3.

[20] Herries Davies (2007), pp.290-3.

[21] Personal communication, Dr P. A. Sabine, 2008.

[22] Herries Davies (2007), p.265.

[23] Herries Davies (2007), p.276.

[24] Personal communication, Dr P. A. Sabine, 2008.

William Smith, John Phillips and The Rotunda Museum Scarborough. Friday 17th to Sunday 19th October 2008

William Smith
(1769-1829)

The Rotunda, 1829

John Phillips
(1800-1874)

Joint Meeting of the

The History of Geology Group of Geological Society (HOGG), The Yorkshire Geological Society in association with the University of Hull Scarborough Campus

Background

Scarborough's Rotunda Museum celebrates the work of William Smith (1769-1839), 'the Father of English Geology'. Smith came to Scarborough in 1820 after his release from a Debtors' Prison in London, and the dramatic coastline and countryside of North Yorkshire offering him an area of geological riches in which to continue to develop his geological ideas. The Rotunda, built under his supervision for the recently formed Scarborough Philosophical Society, was opened in 1829 and was one of the country's first purpose-built museums. Its circular plan was intended to inter-

pret Smith's recognition that the geological sequence can be recognised by the succession of rocks and their enclosed fossils, while around the gallery was a painting of the geological formations of the East Coast from the Humber to the Tees.

Smith's close scientific companion and collaborator was his nephew John Phillips (1800-1874), who's 1829 Description of the strata and organic remains of the Yorkshire Coast applying Smith's principles remains a major landmark in the study of Yorkshire geology. The restoration of the iconic Grade II*-listed Rotunda building has taken 2 years and cost £4.4m. This state-of-the-art redevelopment has returned the Rotunda to its original role at the cutting edge of science. In addition to material from the Museum's own highly important geological collection, fossil specimens from William Smith's own collection, on loan from the Natural History Museum, are now displayed for the first time in Scarborough.

This two and a half day meeting will offer the opportunity to explore aspects of the work of both Smith and Phillips, to visit the newly restored and re-opened Rotunda Museum (http://www.rotundamuseum.org/ and to see something of the geology of the Scarborough area most closely associated with Smith and Phillips, including the new William Smith Geological Trail through the town.

Meeting place

Saturday registration and the main sessions will be on the Scarborough Campus of the University of Hull. Filey Road, Scarborough, North Yorkshire, YO11 3AZ, Grid Ref. TA 046 864.

Registration:

In accordance with Yorkshire Geological Society practice in relation to its charitable status, admission to the Saturday lecture sessions will be free of change. However, for anything more than this - including the Rotunda visit, shuttle bus, excursions and Reception - pre-booking is required. For members of the Yorkshire Geological Society, HOGG, or the Rotunda Geology Group registration is £15 per person; non-members of any of these: £25 per person.

Please send your booking form and a cheque for the amount due payable to "Yorkshire Geological Society" to: Ms Leucha Veneer, HOGG Secretary, Department of Philosophy, University of Leeds, Leeds LS2 9JT.

Overnight accommodation

Scarborough has a very wide range of hotel and guest house accommodation, though all else being equal a central or south Scarborough location is likely to be more convenient, particularly for those without cars. The Scarborough Tourism Bureau offers a free room booking service: Tel. 01723 383637 or http://www.yorkshiremoorsandcoast.com/

Organisers:

Will Watts, Scarborough Museums Trust. Will.Watts@scarborough.gov.uk
Patrick J Boylan, Department of Cultural Policy & Management, City University London.
P. Boylan@city.ac.uk
Leucha Veneer, Department of Philosophy, University of Leeds. phllv@leeds.ac.uk

PROGRAMME

Friday 17th October - Geological walks in Scarborough

14.00 - 15.45. Geological walk to see the Jurassic deposits of Scarborough South Bay, familiar to both Smith and Phillips, led by the President of the Yorkshire Geological Society, Dr Martin Whyte of the University of Sheffield. Meet in the Car Park of The Spa, South Bay, Scarborough YO11 2HD, Grid Ref. TA 044 878.

16.00. Follow the new William Smith Geological Trail from the Rotunda Museum to the Castle. Meet at The Rotunda Museum, Vernon Road, Scarborough, YO11 2NN, Grid Ref. TA 042 884. (Though the Trail is intended to be self-guided, it is hoped that members of the Rotunda Geologyl Group will be available to assist.)

Saturday 18th October: The Scarborough Campus of the University of Hull, Rotunda visit and Rotunda Reception

10.00. Registration at the University Hull Scarborough Campus: Coffee/tea

10.30 - 12.15: First working session

Welcome & introduction by Prof. Pete Rawson, Chairman, Scarborough Museums Trust

William Smith's improvements to the fresh water supply for Scarborough: John Morton, Horsham

William Smith and the Rotunda Museum: Will Watts, Scarborough Museums Trust

William Smith, Evangelicals and Geology: Michael Roberts, Cockerham, Lancashire

Thomas Hinderwell's collections and archives and the Rotunda Museum: Roger Tordoff, Leeds

William Smith's presentation copy of the first edition of the Description of the strata and organic remains of the Yorkshire Coast by his nephew, John Phillips: Norman Butcher, Edinburgh

12.15 - 14.15: Shuttle bus to and from The Rotunda: the William Smith Museum (for registered participants), and lunch break (own arrangements)

14.15 - 14.30: Annual General Meeting of the History of Geology Group (HOGG) (Members only)

14.30 - 17.30: Second Working Session

'The magnificent problem': John Phillips and Geochronology: Jay Bosanquet, University of Durham

John Phillips and the British Silurian Crinoidea: 170 years of monographic endeavour: Stephen K Donovan, Leiden, The Netherlands
John Phillips' collection of Carboniferous ammonoids, described in “Illustrations of the Geology of Yorkshire” and housed in the Natural History Museum, London: Svetlana V. Nikolaeva, Russian Academy of Sciences and International Commission on Zoological Nomenclature,

London

John Phillips (1800-1874) and the Quaternary: Patrick J Boylan, City University London

18.00. Reception at The Rotunda (for registered participants)

Sunday 19th October: Hackness Hills William Smith Walk

09.30 - 16.00. "In the Footsteps of William Smith": A walk around a part of the Hackness Hills mapped by William Smith

Led by Peter Robinson (Yorkshire Geological Society and Rotunda Geology Group)

(Note: this excursion is free of charge, but is limited to 20 participants, so please register for it on the Meeting Registration Form)

Meet at 09.30 at Hackness Village Hall (Red House), Hackness, Scarborough (Grid ref. SE 968 900). To save time, please bring a packed lunch, though some refreshments are available at the Everley Hotel on the walk route. Stout footwear and clothing suitable for the weather of the day. Hard hats not necessary and the walking route is easy to moderate.

From 1828 to 1834 William Smith was employed as land steward to the Hackness Estate by Sir John Johnson. Whilst living in Hackness in a house sited in the grounds of the present Hackness Grange (but destroyed by flood waters in 1857) Smith geologically mapped at a very large scale (6_ inches to 1 mile) an area bounded by Barnscliff to the north, Cumboots to the east, Mowthorpe to the south and Broxa to the west. This map, entitled Stratification in Hackness Hills by William Smith, was published in 1832. A copy of the relevant part of Smith's map will be given to each member attending the excursion.

From the Village Hall, before starting the walk, visits will be made to the site of Smith's home in the grounds of Hackness Grange and the Hackness Rock Pit from which rock was quarried for the construction of the Rotunda Museum.

The walk itself will a circular route along public rights of way from Suffield Heights, at the end of Limestone Lane, (Grid Ref. SE 980 899) where parking is available for a number of cars. The route follows public footpaths through the Hackness Estate, crossing both down sequence and up sequence a series of nine geological units mapped by Smith and shown The aim of the walk is to identify the position of each of the boundaries between Smith's geological units where exposures do not exist by change in land form, land use, soil type and botanical assemblage; much the same methods that Smith may have used.

N.B. There will be a lunch break at the Everley Hotel, Hackness, at around 1pm. and it should be possible for those unable to stay to the end of the afternoon to leave at that point.

Abstracts of Saturday papers

William Smith's improvements to the fresh water supply for Scarborough:
John Morton

The presentation is text-rich, because little visible remains of the work that Smith carried out, since even greater improvements in the water supply have been made since and tend to mask his pioneering achievements. Much of the information comes from the pen of Smith himself. In the early nineteenth century, Scarborough was, as now, a popular resort with a large influx of summer visitors. There was therefore a great need to provide an adequate fresh water supply for them. Smith had been commissioned by the local authorities to carry out a number of public works and could almost have been described as the unofficial Borough Engineer. Through his understanding of geology, he had the brilliant idea of blocking up a local spring and using the aquifer behind it as a natural reservoir, which succeeded in penning up for summer use a huge amount of water collected during the winter months. He also had constructed, as a forward reservoir in the town itself, what was believed to be the largest covered receptacle for water in England,

William Smith and the Rotunda Museum:
Will Watts, Scarborough Museums Trust

Opening in 1829 as simply the Scarborough Museum, the Rotunda is a unique building, providing an important legacy for the Father of English geology, William Smith. The work of researchers such as Hugh Torrens has provided us with a great deal of knowledge of Smith's role in the design and construction of this building, for example we now know that Smith acted as clerk of works for the project. More recently the multi-million pound redevelopment of the museum has afforded the rare opportunity for the staff of Scarborough Museums Trust to delve into the history of the Scarborough Philosophical Society who built the original museum. This work has revealed some fascinating insights into the relationship between the local society and Smith, the respect and admiration they had for Smith and his nephew John Phillips, and how the two have continued to influence the use of the building through to the present day.

William Smith, Evangelicals and Geological Time:
Michael Roberts, Cockerham, Lancashire

In the last decade of the 18th century William Smith was developing his interpretation of the history of the Earth through the application of stratigraphical principles to the geology of the country around Bath. Much of his work was essentially practical, but he was encouraged by some of his contacts to develop and publicise the highly important theoretical implications of this work. Among these were three local Anglican clergy: Richard Warner, Benjamin Richardson and particularly Joseph Townsend, as John Phillips made clear in his 1844 biography of his late uncle. The widely-travelled Townsend, a prominent Evangelical, was especially important, and despite its unlikely title it was through his two volume The Character of Moses established for veracity as an Historian, recording events from the Creation to the Deluge that Smith's Principle of Superposition and his use of marker fossils first became widely known. Over the period ca. 1797 to 1806 Smith appears to have moved from a “short time scale” of the sort advocated by those promoting a “Biblical” time scale to one that would, in Smith's words, “stagger the faith of many”. By the time of the publication of his Character of Moses in 1813 Townsend also had reconciled the “long” (i.e. geological) time scale with the Biblical account of Creation in Genesis.

'The magnificent problem': John Phillips and Geochronology:
Jay Bosanquet, University of Durham

The title quotation is Phillips' description of the age of the earth in a work of 1837. This paper contrasts two controversies on the question in which he was involved. The first was in 1838 with William Cockburn, the pugnacious Dean of York and a biblical literalist. Phillips defended the autonomy of geological inquiry against scriptural authority but did not attempt to quantify the earth's age. The second was in 1860, when he criticised Darwin's calculation of the time needed for the denudation of the Weald, in the Origin of Species. He used the same kind of calculation as Darwin but, using different assumptions, reached a much lower figure. This led Darwin to drop the passage from the third edition. Phillips also used the rate of sedimentation by the river Ganges as the basis for a calculation of the age of the strata which it drains. This gave a figure of 96 million years - close to the 100 million years calculated by William Thomson (better known as Lord Kelvin) based on the rate of secular cooling of the earth. This was old by biblical standards but not enough, presumably, for life on earth to have attained its present variety through evolution by natural selection.

John Phillips and the British Silurian Crinoidea: 170 years of monographic endeavour:
Stephen K Donovan, Nationaal Natuurhistorisch Museum (Naturalis), Leiden, The Netherlands

Sir Roderick Murchison's Silurian - Llandeilo, Caradoc, Wenlock and Ludlow - included strata that we now call Ordovician, but, even as currently restricted, the Silurian System is rich in fragmentary crinoid remains and rarer, more complete specimens. J.S. Miller's A Natural History of the Crinoidea or Lily-Shaped Animals ... (1821), the first monograph of the fossil crinoids, included only three species from what we would now call the British Silurian. The first monographic study devoted to the British Silurian crinoids was by John Phillips (in Murchison's The Silurian System, 1839), who described 14 species (eleven new), all from the Wenlock and mainly from Dudley. These were conservatively placed in five genera, Cyathocrinites Miller, Marsupiocrinites Phillips, Hypathocrinites Phillips, Actinocrinites Miller and Dimerocrinites Phillips. The illustrations in Phillips were much superior to Miller's plates. It is disappointing that the British Silurian Crinoidea have not received published monographic treatment since Phillips. Although many separate papers have been published on Silurian crinoids, the need for a comprehensive monograph on the British taxa was recognised by Bather, for example, as long ago as 1890. Only the Carboniferous has yielded a greater diversity of crinoids in this region.

John Phillips' collection of Carboniferous ammonoids, described in “Illustrations of the Geology of Yorkshire” and housed in the Natural History Museum, London:
Svetlana V. Nikolaeva, Paleontological Institute, Russian Academy of Sciences and
International Commission on Zoological Nomenclature, Natural History Museum, London

The second volume of John Phillips' magnificent work “Illustrations of the Geology of Yorkshire” (1836) dealt with the Mountain Limestone District in Yorkshire and contained an excellent review of the geological settings and many descriptions of fossils from this and neighbouring regions, most of which were illustrated by Phillips' original drawings. The ammonoid descriptions in the second volume of “Illustrations” (1836) were largely based on a collection of Carboniferous ammonoids by William Gilbertson of Preston. The collection was purchased by the Zoology Department of the British Museum in 1841 and is presently housed in the Palaeontology Department of the Natural History Museum, London (NHM). Based on this collection, Phillips (1836) published descriptions of 29 new species of Carboniferous ammonoids and re-described three species of Sowerby's. The collection in the NHM stands out as the largest assemblage of type

specimens of Phillips' species, despite rumours that many of the fossils were stolen or lost during Phillips' lifetime. The type specimens contained in the collection, after being re-described and re-figured, provided considerable additional information. Examination of Phillips' original drawings and notes in the Library of Oxford University Museum of Natural History and their comparison with the material at the NHM revealed that some illustrations based on specimens from the Gilbertson Collection were omitted from the final publication. In addition to specimens figured by Phillips, in some cases it was possible to assume with a considerable degree of certainty which other specimens he recognised as belonging to his new species, especially when they are indicated as such in the original list of Gilbertson that accompanied the collection at the time of its purchase.

John Phillips (1800-1874) and the Quaternary:
Patrick J Boylan, City University London

John Phillips was an early pioneer in the study of Quaternary deposits, much influenced by William Buckland's innovative interpretation of what we now term the Quaternary in his 1823 Reliquiae Diluvianae, published in the light of the discovery of Kirkdale Cave, near Kirby Moorside. The first geological paper of John Phillips, originally read to the Yorkshire Philosophical Society in 1826, was On the direction of the diluvial currents in Yorkshire which examined in detail the distribution and dispersal of erratics, and the evidence for the transport of very distinctive Shap granite boulders and pebbles across the Pennines, Further and updated studies and analysis of the Quaternary were included in successive volumes and editions of his two volume Illustrations of the Geology of Yorkshire published from 1829 onwards, and in later works, notably The Geology of Oxford and the Valley of the Thames (1871). Though in later life he accepted the reality of a recent major glaciation, like a number of other leading figures of the day, notably Joseph Prestwich his successor in the Oxford Geology Chair, Phillips argued that the recent major re-modelling of the British landscape and transport of erratics etc. were due to the movement of extremely strong currents during a period of deep submergence, rather than the action of land glaciation.

Founders' Dinner 2008

13 November 2008
Le Meridien, Piccadilly

This gala dinner will be held in the beautiful Le Meridien Hotel on Piccadilly and will include a drink reception on arrival and a three course dinner, with wine, in the Oak Room.

Prior to the dinner, Professor Hugh Torrens (HOGG Committee Member) will give a brief lecture at the Society, titled *William Smith and the search for raw materials 1800-1820*.

Below are the current proposed timings for this event:

17.30 Tea & coffee served at the Geological Society, Burlington House
18.00 Lecture by Professor Hugh Torrens
19.05 Drinks reception at Le Meridien
20.00 Dinner served
24.00 Carriages

The dress code is lounge suit. Tickets cost £60 per person and are now on sale. A booking form is attached to this newsletter for your use.

Into the subduction zone....?

...and so after 34 issues of this newsletter and 13 years of effort, the time has arrived for me to hand over the reins of the HOGG newsletter to other people. For me it has been an enjoyable if initially traumatic trek. From the humblest of starts, we have managed to meet our obligations to the members each time over the period and produce newsletters, more-or-less on time. There has been some praise over the years from members, but no complaints, so I would have to read that as a general qualified 'OK' to what I and the various committees have done. There have been times of course when I have cursed (volubly and out loud in good English vernacular!) the very concept of the Newsletter, usually when I have been looking at empty pages and wondering what on earth I might fill pages with, but with some scratching around something has always turned up. Despite some cursing, it has always been a pleasure to see something miraculously appear, as I managed to gather together just enough copy to make up an edition, and then lay it out, make sure it was in the right order and hopefully all correctly spelt. For me it was a great feeling of achievement, and I will miss it. One aspect I will not however miss is the weekday evening of stuffing paper copies into envelopes, and the Saturday trek to the Post Office followed by a 'gummy' session with up to 150 stamps! E-mail has reduced that considerably, but it is still a task to be completed each time.

In recent years, the desire of the committee (rightly) to want to improve the quality of the newsletter means that I, as a 'digital-age dinosaur' have found it increasingly difficult to manage, and the current need for me to farm out copy to others to 'set' adds to the difficulty of trying to get issues out on time. I don't feel I have the computer knowledge to be able to move it to higher levels - and as retirement from work edges ever closer, I feel too old to learn. Away from these technical problems, and more importantly perhaps, the constitution of the group doesn't allow me to continue (indeed, I have exceeded the limits a long time ago). So now, as Frank Sinatra once crooned (though I am no fan of his), is the time for me to 'face the final curtain' or perhaps to put it more geologically, to slip quietly and slowly into the subduction zone. Maybe one day, like a mass of rising magma, I shall re-appear in some guise.

I would like to thank all those on the HOGG committee over the years who have given me help and assistance, not least in the earliest days as I felt my way, the late John Thackray. I would also like to thank anyone who has written copy, however short, over the years, and the members of all the HOGG committees who have tolerated me for so long. I wish my successor all the best and hope that the HOGG newsletter will continue long into the future.

Peter Tandy

REGISTRATION FORM

FOR YGS/HOGG, WILLIAM SMITH, JOHN PHILLIPS AND THE ROTUNDA MUSEUM WEEKEND, SCARBOROUGH, 17TH - 19TH OCTOBER 2008

Please post with your cheque, payable to 'Yorkshire Geological Society, to:
Ms Leucha Veneer, HOGG Secretary, Department of Philosophy, University of Leeds, Leeds LS2 9JT

Name(s):

……...

Contact e-mail:

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Postal address and phone number:

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…….

Member of (please mark):

YGS*? HOGG*? Rotunda Geology Group*? None of these**?

Place(s) to be reserved for the Scarborough YGS/HOGG meeting, 17th - 19th October 2008

Number (* member and guests at £15 each): Cheque total: ……..

Number (** non-member at £25 each): Cheque total: ….……..

Reservations for geological walks:

Friday 17th October at 14.00: Jurassic of Scarborough South Bay:
Number: ……

Friday 17th October at 16.00: William Smith Geological Trail:
Number: ……

Sunday 19th October at 09.30: In the Footsteps of William Smith:
Number: ……

Specialrequirements/Notes:

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Founders' Dinner 2008
13 November 2008
Le Meridien, Piccadilly

Booking form – please complete in capitals

Personal Details

First Name: _____ **Surname:** _____

Company: _____

Address: _____

_____

Postcode: _____ **Tel No:** _____

Email: _____ **Fellowship No (if applicable):** _____

Registration Fees

Seats required – individual or table	**Cost per place/table**	**Number of places**
Individual places	£60 each	
Table (10 places) **NB. Max one table per company**	£600 per table	
Total		

If you are booking a full table but would ideally like more than one table, please note on your form and we will contact you if another becomes available.

Please delete as appropriate (if you leave this section blank, we will assume you will not attend the talk)
We / I will / will not be attending the free of charge lecture by Hugh Torrens at Burlington House before the dinner.

Payment Details

☐ I enclose a cheque for £ _____ made payable to the Geological Society

☐ Please debit my Visa/Master/Amex/Switch card by the sum of £ _____

Card Number: _____ Expiry Date: _____

Security Number (last 3 digits on black strip on back of credit card): _____

Issue number (if using Switch or Maestro): _____

Cardholders name and address if different from above: _____

_____

Signature:_____ Date: _____

How did you hear about this event: _____

General Information

Full prepayment must accompany your registration form to guarantee a place. An email confirmation will be sent on receipt of your completed registration form. A VAT receipt may be issued on request. Notification of cancellation must be given at least 20 working prior to the event for a refund to be given.

☐ We would like to keep you informed about future meetings and other Society activities. Please tick here if you do not want to receive this information.

Please return this form to: Alys Johnson, Events Manager, Conference Office, The Geological Society, Burlington House, Piccadilly, London, WIJ OBG. Tel: +44 (0) 20 7434 9944 Fax: +44 (0) 20 7494 0579. Email: alys.johnson@geolsoc.org.uk

Crayon sketch by W. Tindall c. 1840, of the Rotunda and Cliff Bridge at Scarborough