

GEOLOGICAL SOCIETY



HISTORY
OF
GEOLOGY
GROUP
Newsletter

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In celebration
of
the 150th Anniversary of the founding of the
PALAEONTOGRAPHICAL SOCIETY

a one day symposium is being organised
on
**THE HISTORY OF
PALAEONTOLOGY IN
GREAT BRITAIN**

at
the Dept. of Earth Sciences, University of Cambridge, Downing Street
Cambridge, CB2 3EQ

on
Wednesday 24th September 1997

by
The Palaeontographical Society and the History of Geology Group of the
Geological Society

History of Palaeontology, programme:

- 10.00. Coffee & registration (Ground floor senior common room)
10.20. Convenor - Administration announcements
10.25. Robin Cocks - President of Palaeontographical Society & Keeper of Palaeontology at
The Natural History Museum, London

Session 1. (all sessions are in the Tilley Lecture Theatre, ground floor)

Chairman: John Thackray

- 10.30. Bob Markham - formerly Ipswich Museum
Searles V. Wood, 1798-1880. Author of *The Crag Mollusca*, Pal. Soc Monograph no. 1
10.45. Robin Cocks
The influence of Thomas Davidson's monograph on Brachiopod Studies
11.00. Prof. Neville Haile - Oxford Brookes University
From 'figured stones' to palaeoecology: aspects of the progress of English
palaeontology to 1830
11.30. Prof. Martin Rudwick - San Diego, USA
George Cuvier's fossil bones: The museum as a place of knowledge
12.00. Prof. Philip Rehbock - University of Hawai'i
The discovery of species extinction at the beginning of the 19th century & its
acceptance in Britain
12.30. Prof. Mike Bassett - National Museum of Wales, Cardiff
Pre-Linnean palaeontology in the British Isles

12.45 - 2.00

LUNCH

Session 2

Chairman: Dr Robin Cocks

- 2.00. Prof. Bill Chaloner FRS - Royal Holloway College, London
John Lindley & the foundation of British palaeobotany
2.30. Prof. John Callomon - University College, London
British Mesozoic ammonites described in the monographs of the Pal. Soc.
3.00. Dr David Norman - Director, Sedgwick Museum, Cambridge
Cuvier, Mantell, Owen & the *Dinosauria*

3.30 - 4.00

TEA

Session 3

Chairman: Dr David Norman

- 4.00. Stuart Baldwin - Witham, Essex
The progress of pictorial palaeontology on British book bindings
4.30. Peter Crowther - Belfast City Museum
Palaeontographical Society illustrations
5.00. Peter Doyle - University of Greenwich
The Crystal Palace 'dinosaurs': the first full-scale representation of theoretical geology
for the paying public
5.30 John Thackray - Chairman History of Geology Group
Summary, questions & close
6.30 onwards

CELEBRATORY DINNER

at Emmanuel College, Cambridge (2 minutes from Sedgwick Museum) . Cost: £25 per head
(please make cheques payable to HOGG and send to the convenor:

...and the previous HOGG meeting:

Publishing & the World of Print in the making of Geology

The first speaker was Jim Secord with a talk entitled: The Stone Book: Geology & the Industrial Revolution in Publishing. Geology has always had an association with printing going right back to the beginnings of book production. In traditional print shops from the time of the invention of the printing press in the 15th century, to the late 18th century there was very little change in books produced. Text was set in type on a form which was passed through a hand-operated press, & these processes were done by individual workers. Knowing where to find the types quickly from many hundreds available, made the task of compositor a specialised job. Books of the 18th century, e.g. W. Whiston's "Theory of the Earth" were for small audiences and were hand produced with simple bindings and hand-made paper. Publishers bought shares in books, hence the large number of publishers often cited. In the late 18th century, important changes some involving machine technology took place. Printing presses became iron framed & gave more impressions before wearing out. Presses also became very large and were run by one man and a few boys. Changes appeared first in newspapers, the Times from 1814, then books in the 1820s-30s. Paper was being made by machine but acidic paper only appeared around 1850. There was also the idea of stereotyping - using materials to make set type which can then be used to make other copies & allows type to be re-used. It also allowed reprinting at a later date, instead of keeping masses of heavy type tied up. Binding was still largely hand-done, but books were often sold in cloth cases. Geology had potential difficult problems regarding religion, e.g. Moses, and monitoring of material being presented to the public was required, and Earth Sciences was typical of specialist publishing. Edition runs (750 as a typical average) were low, which limited the numbers able to get at ideas. The price was often very expensive and the size of the receiving audience was often overstated. MaCulloch's work, priced at 3 guineas (on an income of the well-to-do of £200/year), becomes an expensive work even for institutes. Production costs were also important; 2/3rds of MaCulloch's book was eaten up by plates in the 3rd volume. John Murray, publisher of Lyell's "*Principles of Geology*" made a large print run (>1000 copies), and so reached out to a wider audience, but it was still quite expensive. Murchison's *Silurian System* also had problems with plate engravers and it is estimated that 800 copies were sold (by subscription), but to a non-subscriber it was 8 guineas; this was a work meant for a Gentleman's table!. A classical image with wide margins and good printing was created by the publication of the Geological Society's Transactions. It was published in >500 copies per issue and cost £1.10.0 in addition to Geol. Soc. fees. There was a debate when the Geol. Soc. was founded about publishing an expensive Transactions or a cheaper version. In the 1840s the QJGS began to be aimed at a broader audience at a cost of just 4/- and with more pages. This initiative was praised by Charles McLaurin, editor of The Scotsman. Most publishers had general lists of books, but there was the gradual development of the specialist publishers, the most important being J.E. Taylor of Red Lion Court, who produced coloured maps. More advanced books became not so much books as hand-books or manuals for individual study purposes. The 1870 Education Act brought sciences into a predominant role, and made a large market for texts. Archibald Giekie was one who benefited most, as he wrote a huge number of texts covering all market niches. The decline of Murray as a publisher was accompanied by the

rise of others like Macmillan and CUP. The advent of cheap acidic paper and the change from individuals publishing to large companies publishing, allowed a drop in prices, and the industrial development of geological texts made geology a science. Today there are further big changes with electronic publishing; a change which might yet be as big as the introduction of the printing press itself in the 15th century.

(from notes by the Editor)

Jim was followed by Hugh Torrens who spoke on "Practical Geology: Problems in its printed record and for its proponents"

A case could be made that the most significant original member of the Geological Society of London was William Phillips (1773-1828), the printer and publisher of the first five volumes of their Transactions, (with volumes 2-5 at his own risk and a loss!), as well as many other such publications. These are often taken to provide a full enough record of British Geology at this time. This paper asks if this printed record gives a proper record of geological activity at that time.

The career of the mineral engineer, John Williams (1732-1795), who claimed in 1787 that "Britain already receives more benefits from the bowels of the earth than perhaps any other nation", provides some insights. Apart from his book The Mineral Kingdom (published in two editions and parts published or translated in America and Germany), Williams wrote at least eleven other items. Of these only four were published 'normally', two others were only published well after his death, two were Prospectuses for never published books/maps while three others were read but never published. This suggests a lot more activity on Williams' part than reached the printed page. I believe such problems are characteristic of "practical" geology and that we assess contributions in this area only through the 'normally' printed word at our peril.

In the first place, many of the printed works of such activity are of great rarity. One copy of William Sharpe's 1791 reprint of the lost 1770 appendix to his 1769 Treatise on Coal Mines survives, as does James Efford's 1783 Apparent Signs describing attempts for Devon coal. Such people worked in a highly individualised laissez-faire society, quite different from those with state-support in Germany and post-revolutionary France. William Smith soon suffered problems just like Williams', with the work offered in his 1801 Prospectus similarly unpublished. Neither his Strata identified nor Stratigraphical System were ever completed. Compare this with the at least six different printed versions of Cuvier & Brongniart's "rival" work in France at the same time. Smith's pupil John Farey's thought-provoking cross-sections and maps of England and Scotland also remained unpublished (and are still being, and one hopes still to be, discovered).

The ephemeral nature of the record of so many aspects of practical geology needs to be emphasised by historians. The only near complete record for any of the many coal trials made in 18th and early 19th century Britain survives in a local (Shaftesbury) Museum, despite the many such attempts made and their importance. Records of the (? world's) first scientifically-advised-against mineral prospect (in Somerset) survive only in local newspapers or in school or other archives (see "Le 'Nouvel Art de Prospection Minire' de William Smith et le 'Projet de Houille de Brewham': un essai malencontreux de recherche de charbon dans le sud-ouest de l'Angleterre, entre 1803 et 1810", in De la Geologie Son Histoire: Livre Jubilaire pour Francois Ellenberger, Societe Geologique de France, Paris, 1997). The trials for coal at Bexhill, Sussex which reputedly cost £80,000 and were used by Sir John Herschel in 1831 to claim a real utility for science, are again only (partly) documented and by such sources, not in printed form.

The record of "practical" geology is clearly highly "papyrophobic". So any priority battles

between academic and 'practical men' need to be investigated by also seeking out such sources, and not by simply relying on the 'normal' record in print, by its nature designed to show the academic achievement as the greater and more significant. Nicolaas Rupke rightly noted that "the practical aspect of geology was regarded as of little interest by the English school... and was thought not to merit academic rank". The size of the cohort of practical men in geology has similarly been consistently underestimated. Few published much, for economic reasons. Many were additionally migrant all round the world seeking minerals, in Australia, the South Seas, both the Americas, India, Russia etc etc. John Williams had died in complete obscurity in Italy, in a country whose language he did not speak with his 'sponsor' in an English jail for revolutionary activities. These are not features to ensure a good record in print.

But the, significantly British, Industrial Revolution could not have taken place without such individuals and it is time we investigated the scale of their contribution to the science of geology. As Geoffrey Tweedale noted recently "the interaction of geology with industry remains a blind spot in the historiography. Historians prefer 'gentleman' geologists". It is time we studied the brunettes as well...

Hugh Torrens

Nicolas Rupke then spoke on "Illustrating the Cosmos: the 'Justus Perthes Verlag' in Gotha" (no abstract received)

Brian Dolan then offered a paper titled 'Charles Babbage, the "Temple of Serapis", and the Uniform Representation of Geological Change.' The following is a summary of the topic which Dolan is also continuing to research.

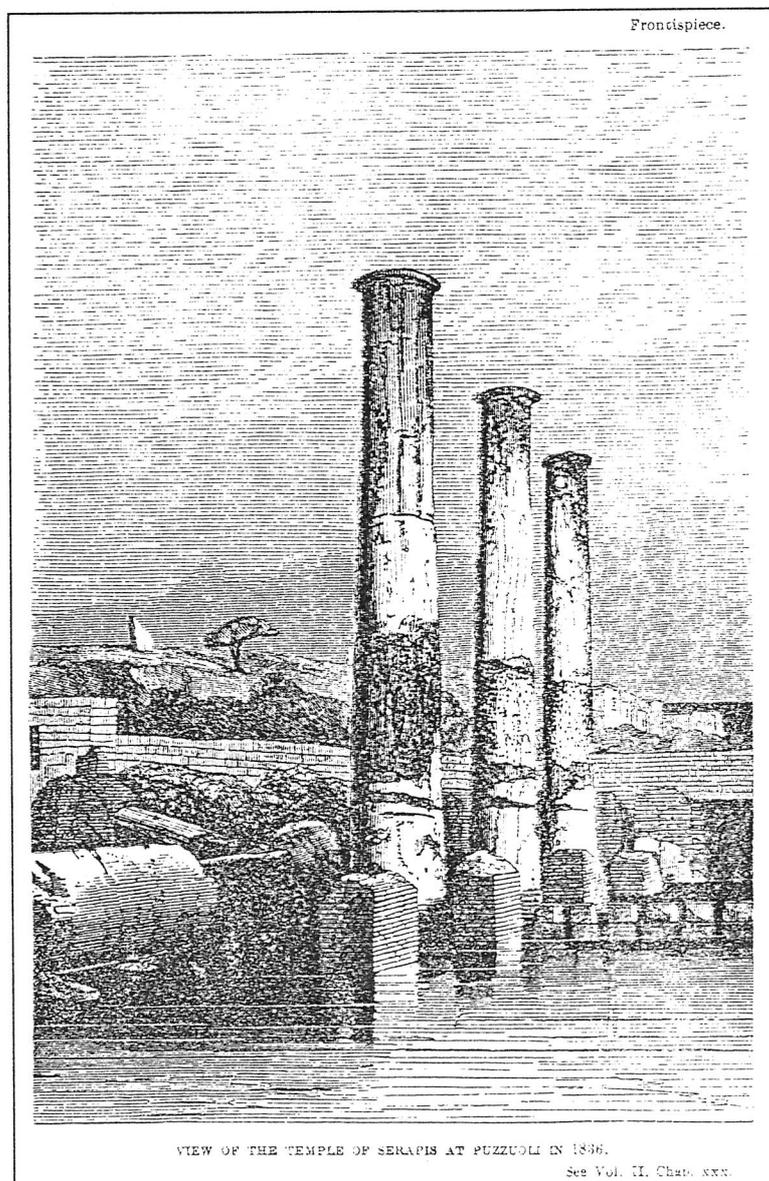
Engravings of the Temple of Serapis are familiar to historians of geology. The Temple has been made into an icon used to represent Lyellian uniformitarianism. Since Lyell's use of the 1820 engraving which appeared as the frontispiece to the first and subsequent editions of his *Principles of Geology*, accounts of the Temple have often been central in debates regarding uniformitarian theories in geology. However, in 1847 the seventh edition of Lyell's *Principles* was published with a new frontispiece depicting a new view of the Temple. The latter illustration was drawn by an artist who visited the site in 1836 who used a camera lucida--a relatively new instrument used to reflect landscape images on paper for more accurate tracing. It may appear an exceedingly pedantic question, but why did Lyell change frontispieces? The answer is directly related to another paper on the Temple of Serapis, also published in 1847, in the *Journal of the Geological Society of London* by Charles Babbage. It was for Babbage's paper that this new illustration was specially prepared. Babbage developed a theory of land subsidence and elevation which centred on the effects of a subterranean heat source on gradual and uniform changes in the earth's crust. To illustrate his theory, Babbage used a special technique of mechanically reproducing drawings used to represent changes in the relative level of land and sea, and used his calculating engine to work out mathematical relations of the effects of subterranean heat on rock expansion and contraction.

The theory Babbage expressed in his paper regarding the uniform processes of geological change--of the uniformity of the actions of land subsidence and elevation--was different from Lyell's but had an affect on Lyell's theory as he expressed it in later editions of his *Principles*. This claim may sound unusual since Babbage is most familiar to historians as the "pioneer of the computer." Indeed, Babbage's work in geology was small: a conservative half-dozen papers and a thin book in total within a corpus of over seventy articles and half-dozen books, most of which do of course relate to his interests in mathematics. Babbage's

geology related to--and indeed was born from--his concerns over reform in science and ways of representing scientific knowledge. Babbage's interests in political economy and manufactures, in the mechanisation of print and illustration, in accurate drawing and graphic design (particularly relating to the construction of his infamous "calculating engine"), all shaped the way Babbage thought about geological phenomena and ways of representing the earth's activities.

Babbage's geology and relationship with Lyell has been neglected or completely overlooked in the history of geology. In classic essays on the development of uniformitarianism in geology, Walter Cannon went as far as to suggest that Babbage's theory was never incorporated into Lyell's *Principles*, mainly because Lyell "feared" theories that were "based on the laws of physics." It has further been indicated by Cannon, Stephen Brush, and more recently by Crosbie Smith and Norton Wise, that the Cambridge mathematics tutor William Hopkins, who in 1835 coined the term "physical geology," was the first in Britain to apply effectively mathematics and physical principles to explanations of geological phenomena.

Throughout the 1840s and 1850s, Hopkins mathematically calculated increasing temperatures of subterranean heat and its distribution through the earth's crust and concluded that a molten mass was gradually cooling and dissipating its heat from the centre of the earth. His work, which was famously extended by his Cambridge pupil William Thomson, was used to attack Lyell's steady-state, uniformitarian theory. However, as Cannon and Brush both suggested, Hopkins' physical geology appears to have confused British geologists, both uniformitarians and catastrophists, as to the effects or even nature of a subterranean heat source. Two salient points here need to be drawn out. First, debates over the role of a possible central heat source on geological phenomena were not merely theoretical but concerned the appropriate methodology of science. Second, the application of mathematics to geology by Hopkins and Thomson to examine fluctuations and effects of subterranean heat was not new, nor necessarily more useful for one-or-



another of the advocates for “uniformitarianism” or “catastrophism” in attempt to settle the debate.

Babbage’s work in calculating the effects of subterranean heat on geological actions were used to support a theory of uniformitarianism. His activities, as well as those of his contemporaries, such as John Herschel, represent a more coherent development of physical geology as later developed by Hopkins and Thomson. Further, Babbage’s use of mathematics, physical principles, and experimental science, which were brought to bear on questions of geological phenomena in the late 1820s, were expressions of his commitment to calculation, measurement, and the economy of machinery.

Brian Dolan

Next was Stuart A. Baldwin who spoke on "Lyell and the Extraordinary Publishing History of his Works"

Introduction

This is an attempt to give an outline of the result of the collaboration between Charles Lyell and his publisher John Murray from 1826 (the year in which he was elected a fellow of the Royal Society and his family moved home from Bartley Lodge to Kinnordy) to the end of 1958 - a period of 133 years.

Though Murray’s is now a Limited Company chaired by John Murray VII (a direct descendent of the founder] it has essentially been a one-family firm since it was founded in 1768 by John MacMurray (1745-1793). He was a lieutenant of Marines in his early 30s who retired from the Navy on half pay and for £400 purchased the bookselling business of William Sandsby at the sign of the “ Ship” at number 32 Fleet Street opposite St. Dunstan’s Church. He dropped the Mac from the family name and started in business knowing little about bookselling or publishing.

An example of the problems he faced is given by Smiles(1) “*He had to give very long credit and run the risk of customers being drowned, or lost in battle or succumbing to unhealthy climates before they could settle their accounts.*“ (Today’s excuse for not paying accounts on time is more likely to be “*Sorry I’ve been in the field,*“) These and other problems were surmounted and the business flourished and moved to Albemarle Street on 29th September 1812. His son JM II(1778-1843) ran the firm until his death and his son JM III presided over the firm from 1843 till 1892. That John Murray’s became one of the great British scientific publishing houses of the 19thC, I feel is largely due to to the influence of JM III. His father and grandfather had made their money from publishing items such as the London editions of *The Edinburgh Review*, and *The Quarterly Review*, and poetry and fiction, notably the works of Byron and Scott. The incredible popularity of these two authors is difficult for us to understand today but it is recorded that large queues would form in Albemarle Street to buy the latest Byron poem straight from the publisher. Such were the crowds that Charles Lamb called it John Murray Street.

John Murray III was educated at Charterhouse and Edinburgh University where his chief interest was in science and especially Geology and Mineralogy , He was a keen amateur geologist and was generally interested in the scientific speculation of the day. Thanks to the help given by Virginia Murray , wife of the present Chairman and archivist to the firm, I have spent many fruitful hours searching their records to help with the preparation of this talk and of a bibliography of Charles Lyell I am currently writing. I would also like to thank Tony Swann, Chairman of Wheldon & Wesley Ltd for allowing me access to their Lyell records which resulted in my discovery there of a new binding variant. Though I can find no positive evidence to suggest it, I feel sure that JM III must have exerted a considerable influence on his father to publish Lyell’s *Principles of Geology* in 1830. (In one of Lyell’s letters early in 1859

he asks JM III to consider publishing *On the Origin of Species* an important new work by a Mr Darwin)

Lyell was a highly articulate and intelligent man with a wide circle of friends and contacts, and in his late 20s he was contemplating writing a major work on geology, though still working as a barrister. He reasoned quite logically that in order to do this he would need to prepare his mind(2) and at the same time find a publisher. Lyell soon sought out Lockhart, the recently-appointed new editor of *The Quarterly Review* and had breakfast with him(3). By June 1827 he had already written two articles for *The Quarterly Review* - one on the *Transactions of the Geological Society* which included a review of recently published geological books and as Wilson(4) points out was also an effective summary of the state of geological science at the time; and another on the *State of the Universities*. For the former he received 40 guineas from Murray. To further prepare his mind geologically but without exhausting his material he wrote an article for *The Quarterly Review* on Scrope's *The Geology and Extinct Volcanoes of France*.

As a young barrister Lyell records in his notebook(5) for July 1827 "Income £5 or less, expenses £8 or more", indicating that his finances were in a highly unsatisfactory Micawberish state. The appeal to him of earning money by writing, such as his articles for *The Quarterly Review*, was obvious. Early in 1828 he accepted his father's(6) advice to write, gave up his legal work and devoted himself wholtime to writing, predominantly but not entirely on geology. He immediately set out on the first of four extended field trips to the continent to study the Tertiaries, initially in the company of the Murchisons and it was on this trip that "Lyell confided to Murchison that he wants his forthcoming book, 'in part written, and all planned' to pay the *additional* costs of his hobby, so that he can devote himself wholly to geology without feeling selfish." From this it can be inferred that Lyell considered himself an amateur with respect to Geology.

Having set the scene let's have a closer look at what Lyell and the Murrays actually achieved. In summary Lyell wrote six works which ran to a total of thirty-five editions of which one or more were in print from 1830 to 1958. A total of 136,012 volumes were printed which yielded to Lyell a very fine income from John Murray of which more later. In the time available it is not possible to cover everything so I shall concentrate on the unusual.

The Books and their Editions

The *Principles of Geology* was originally planned by Lyell to be complete in two volumes and the title page of volume 1 which was published in January 1830, indicates that there were to be 2 volumes. At that time it was usual for Murray's to print a maximum of 750 copies(8) and the 1500 run of volume 1 (retailing at 15/-) was unprecedented for a new author. It was probably partly due to John Murray II's & III's faith in Lyell, based on his previous work for them and his scientific reputation, and partly on Lyell's business acumen and his powers of persuasion. Lyell received 12 personal copies, 19 more were sent for review and an obligatory 11 went to Stationers Hall(9) for national and other libraries. Volume 2 followed in January, 1832 (though with the expansion of Lyell's knowledge and ideas it was only the first half of what was meant to be volume 2) with the same print quantity (retailing at 12/-). In the preface to this Lyell indicated the need for a third volume fully to explain his views. Before this could be produced however the brisk sales of volume 1 called for a second edition. Minor corrections and additions were made and the 2nd edition of volume 1 (1,000 copies retailing at 15/-) was issued in January 1832, the same month as the 1st edition of volume 2. The second edition of volume 2 followed in January 1833 and we then have the extraordinary situation of volume 3 (1st edition), issued in May 1833, being common to both editions. A sufficient quantity (2,500 copies retailing at 18/-) was issued to satisfy both editions. This still causes

confusion today amongst booksellers and collectors, and because of the time delay between start and finish there is a considerable demand for odd volumes of both the 1st and 2nd editions.

Ten subsequent editions were produced: the 3rd-5th in 4 volumes, the 6th in 3 vols, the 7th-9th in one volume and the last three in two volumes. The maximum print run was 5,000 for the 9th edition and there was a total of 29,500 copies of all editions. Between the 5th and 6th editions of *Principles* the 1st edition of *Elements of Geology* was issued in 1838 with an amazingly large print run of 3,500 copies. This had been written in the form of a supplement to the *Principles* and 'was confined strictly to Geology proper(10), so that it was distinct in its subject-matter from the three first Books of the *Principles* which related exclusively to those recent changes of the earth and its inhabitants which are illustrative of geological phenomena.' However as it had some common ground with volume 4 of *Principles* this was dropped from the 6th edition of *Principles*.

The *Elements of Geology* can therefore be regarded as an offshoot (or if you like, 'son') of the *Principles* in the form of an expanded version of Volume 4. With the 3rd edition issued in 1851, Lyell changed the title to *A Manual of Elementary Geology* and reaffirmed in the preface that "*Principles*" is concerned with modern changes of the earth and its inhabitants, while the "*Manual*" relates to the monuments of ancient changes. A separate 16 page Appendix to the 3rd edition was issued on 10th December 1851 and is exceptionally scarce. The 5th edition had at least two different supplements which are not often seen, and with the 6th and last edition (4,000 copies) the title reverted to *Elements of Geology*. Lyell gives as the reason for this the inclusion of much new material since the last edition of 10 years ago 'which has thus outgrown the dimensions usually assigned to a Manual.'

Travels in North America (2vols, 1845) and *A Second Visit to the United States* (2vols, 1849) both went to second editions, though on searching through Murray's archives I could find nothing at first on the second edition of *Travels*. Several hours later I discovered the answer: 1750 copies had been printed initially but sales were slow and a small entry in the ledger (D217) shows that 10 years later in March 1855, 250 copies of a separate title page saying second edition were printed. These were inserted in remaining copies of the first edition in place of the original title page and was an obvious ploy by Murray's to stimulate sales. Similarly a so-called third edition of *A Second Visit to the United States* was produced. This is the only English edition of his works I have not seen and I would be delighted to hear from anyone who has a copy. These two were the least successful of Lyell's works.

The Antiquity of Man first appeared in February 1863 (five years after Darwin's *Origin of Species* but seven years before his *Descent of Man*) with an unusually large initial print run of 4,000 (retailing at 14/-). The demand was so great that a 2nd edition was printed in April and a 3rd in November of the same year. A final and 4th Murray edition appeared in 1873 and two Everyman editions in 1914 and 1927.

When considering a 7th ed. of *Elements of Geology*, Lyell was persuaded by his friends to reduce the size to that approaching the original so that its cost might be within the reach of the ordinary student. By pruning theoretical discussions and where possible confining himself to examples of British rocks he produced in 1871 what was substantially a new work titled *The Student's Elements of Geology*, with the largest of any print run of Lyell's works of 6,000 copies. Three further editions, all with a large print run followed, two of which were posthumous. Such was the success of *The Student's Elements of Geology* that two further editions based on it were issued by Murray's in 1896 and 1911. It was renamed *The Student's Lyell* and edited by John W. Judd. A study of the ledgers shows that the last (1911) edition of 2012 copies, was in print until the end of 1958.

Book Finance

Lyell used his powers of persuasion from his training as a barrister to get the best possible terms from his publisher. During their relationship he received a total income from Murray's of £11,135 of which nearly 50 % came from the *Principles*. (The equivalent today using an inflation factor of x75 would be about £835,000 giving an average of about £18,500 per annum between 1830 and 1875). Not a bad way of financing your hobby 1

Book Bindings

Binding variants were illustrated [by Stuart at the meeting, Ed.] and Lyell's works exemplify one of the earliest British examples of the pictorial gilt embossed cloth cover in publishing - a theme that will be followed at the next meeting of the Group on the History of Palaeontology at Cambridge on September 24th 1997 .

References

1. Smiles, Samuel. A Publisher and his Friends. Memoir and Correspondence of John Murray with an account of the origin and progress of the house 1768-1843. 2 vols. 2nd ed. John Murray, London 1891. Page 3.
2. Idem pp 267, 390.
3. Letter to his father, November 16, 1826 in Life Letters and Journals of Sir Charles Lyell, Ban. Ed. Mrs Lyell 2 vols. London, John Murray, 1881.
4. Wilson, L.G. Charles Lyell The Years to 1841: The Revolution in Geology. Yale University Press, New Haven and London, 1972. Page 154.
5. Idem page 172.
6. Bailey, E. Charles Lyell. Thomas Nelson, London, 1962. Page 68
- 7 Idem. Page 72.
8. Personal communication from Virginia Murray.
9. The 19th C equivalent of today's Legal Deposit Office which requires far fewer copies.

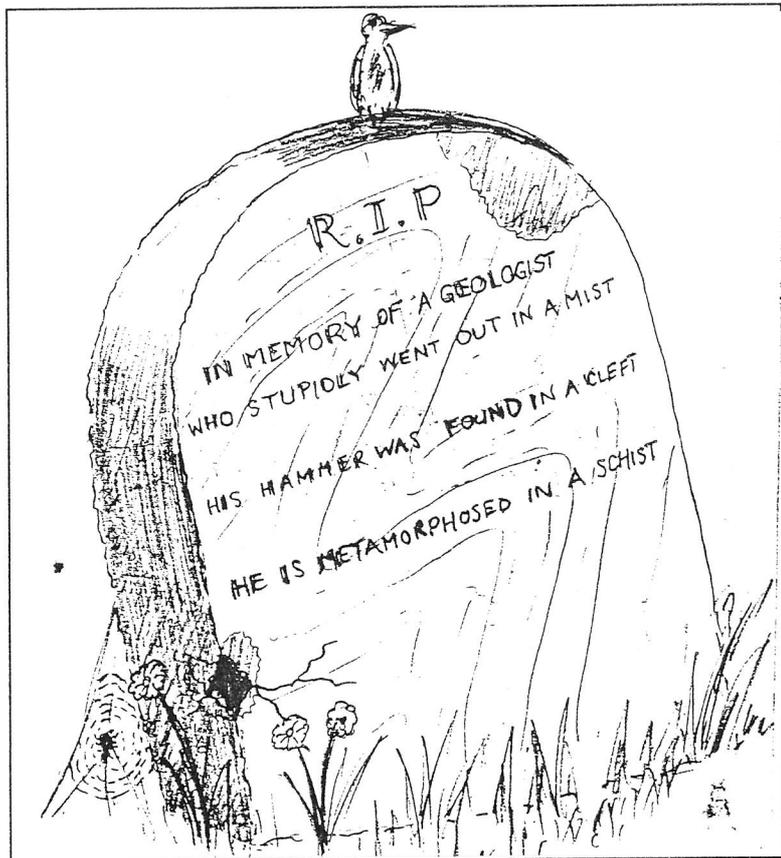
Academic proceedings were concluded by Jonathon Topham on "William Buckland's Bridgewater Treatise: As much a newspaper subject as an Horrible Murder". This work in 12 volumes was commenced in 1830 by the President of the Royal Society. It was published at gentlemanly prices and sold quite well. William Buckland's contribution, which took 6 years to complete, and had an effect on how the volumes were read, was an important part. In sales it was second only to (?)Whewells Astronomy, with 8000 copies sold in a single year. Most were sold between 1833 and 1834, and the last in 1836. It was different because publishers, printers, binders and sellers had an input on content and price. But the size and range of readership still took the producers by surprise. It was read in a wide variety of contexts and served different purposes to different people. The early 19th century saw an increase in publications and there were more than 120 reviews of the Bridgewater Treatise in over 40 periodicals.

(from notes by the editor - no abstract received)

With the conclusion of proceedings many felt that this had been the best HOGG meeting to date.

A grave meeting

Despite the short notice, six people turned up at Kensal Green cemetery, London, on a gloriously sunny afternoon on Saturday 19th July, to listen to Dr Eric Robinson talk about people, gravestones and rock types. Kensal Green cemetery was laid out in the 1830s as the first cemetery outside the bustling city of London. The General Cemetery Company was founded in 1830 and two years later gained Royal Assent to a Bill for "establishing a general cemetery for the interment of the dead in the neighbourhood of the metropolis". The site was 54 acres of rural Kensal Green. Although the Victorians were responsible for much of its development, with meandering paths and many planted trees so



that it was not a morbid place but one of a 'sweet breathing place', and suitable for 'contemplative recreation and the moral improvement, spiritual enlightenment and general education of the living', it should be noted it started in the reign of William IV. To be buried in a city grave involved certain risks, not least graverobbers, so the rich and famous elected for the green acres of Kensal Green, and the interment of two children of George III made it very fashionable and assured its prosperity. Many had elaborate monuments built, involving designs based on Greek temples, Gothic chapels, Egyptian extravaganzas, with obelisks, sarcophagi, urns and angels of all sizes and in a number of rock types, some of which have survived well and some of which show signs of weathering. Among geologists who now rest there are Sir Henry de la Beche whose simple part-dressed granite monument was only re-discovered last year, George Bellas Greenough FRS, and John Frederick Blake whose monument is a delightful larvikite-type rock lighthouse on a Carara marble base. Other rock types to be seen are Portland stone, New Red Sandstone, Rubislaw granite, Cornish granite, Bessbrook granite, along with occasional serpentine, and a number of artificial stones of the Coade-stone variety. Other notable persons there are Charles Babbage (simple tomb of Cornish granite), William Mulready (elaborate tomb in classical style and made of a 'Coade stone'), various Brunels (simple block of Carara marble), Blondin, the tightrope walker (red granite with marble medallions), Wilkie Collins (white marble cross) and many others too numerous to mention.

Anyone wishing to go along to see the tombs should note that it is open daily, with tours from the Anglican chapel at 2.00pm every Sunday (+ a tour of the catacombs on the first Sunday in the month - bring a torch !!). Anyone wanting to study the rock types should take a small garden spray bottle of water and a rag to remove some of the organic 'growth' on some of the

tombs. A small booklet (only £1) detailing some of those there, is available, (a more substantial work is at the proof-reading stage).

(from notes by the Editor)

...and the next HOGG meeting

Details have yet to be formulated, but the next meeting (after the Cambridge meeting - see front page) will be in the Spring of 1998, probably in late May. This time it is proposed to make the meeting a field trip to Ludlow in Shropshire. More details will be in the next newsletter. The AGM of the Group will be held at the same time.

...in the meantime

The Hutton-Lyell conference outlined in previous newsletters (HOGG Newsletter no.5.) is now taking place. We hope to have a short report of proceedings in the next newsletter

For the future...

Geology and natural history are being treated as honorary biology for the purposes of the following meeting, organised jointly by the John Ray Trust, The Institute of Biology's History Committee & the Society for the History of Natural History:

"John Ray and his successors: the clergyman as biologist"

March 1999

John Ray (1627-1705) was one of the most important biologists in the history of the subject and this conference will celebrate all aspects of his life & work. He was ordained and his religious beliefs informed his work and were widely influential. The conference will go on to consider the British clergy (or their families) who were biologists and their distinctive contributions to both church & science. This will include theology, social roles & individual biographies. The third focus of the conference will be the current experience of people who are both clerics and biologists. Keynote addresses will be given on each of these themes.

The conference will be held in Braintree, Essex - Ray's home town - coinciding with the town's 800th anniversary celebrations. Braintree has a train service from London, is close to the A12 & M11, and is in easy reach of Stanstead Airport.

Anyone wishing to present a paper will need to provide an abstract by 1 March 1998
Further information available from Rev. Nigel Cooper, The Rectory, 40 Church Road, Rivenhall, Witham, Essex CM8 3PQ (tel: (+44)(0)1376-511161; e-mail (for messages) cgw23@cam.ac.uk)

For your bookshelf...?

Just as we were going to press, we were informed that the Geological Society has published a reprint of volume 3 of James Hutton's "Theory of the Earth", the Archibald Giekie edition.

This is available from the Geological Society Publishing House at a price of £15 for fellows and £30 for non-fellows. We hope to have a fuller report in the next issue.

Apart from that, the following publications are worth acquiring:

Thomas Webster (1772-1844): first Professor of Geology at University College, London
by Wendy Kirk

Archives of Natural History (1996) 23 (3): 309-326

Charles Lyell in America - his lectures, field work, & mutual influences, 1841-1853

by Robert H. Dott Jnr

Earth Sciences History (1996) 15, no.2, 101-140

Darwin at Llanymynech: the evolution of a geologist

by Michael B. Roberts

British Journal for the History of Science, (1996) 29 (4): 469-478

... and another bicentenary

The Geological Society is starting to think about its bicentenary, to be celebrated in the year 2007, and in particular about the production of a new history. Council would be glad of an input from members of the History of Geology Group, particularly regarding the following points:

1. Should the new book cover the entire history of the Society or just the 100 years since the publication of Woodward's book ?
2. Should it be a serious scholarly work, full of facts, or something rather lighter, glossy and illustrated which might appeal to a wider audience ?
3. Should it be an administrative history of the Society or tell the story of the researches undertaken by its fellows ?
4. If serious and scholarly, should it be the work of a single author or be multi-authored under a controlling editor ?
5. When should the history appear ? Do we wait until 2007 or aim for a year of two earlier, or even the year 2000 ?
6. When should the work be commissioned ?
7. Who would be the best person to write or edit it ?

The Group will host an open meeting at Burlington House on **Wednesday 15th October** at 11.00 am to discuss these questions and any others that may arise. Steve Culver, Publications Secretary, will attend. Written comments from anyone who cannot attend will be very welcome.

John Thackray (HOGG Chair)

...and finally

A reminder that contributions to the Newsletter will be required in January 1998. These are to remain at £7.

