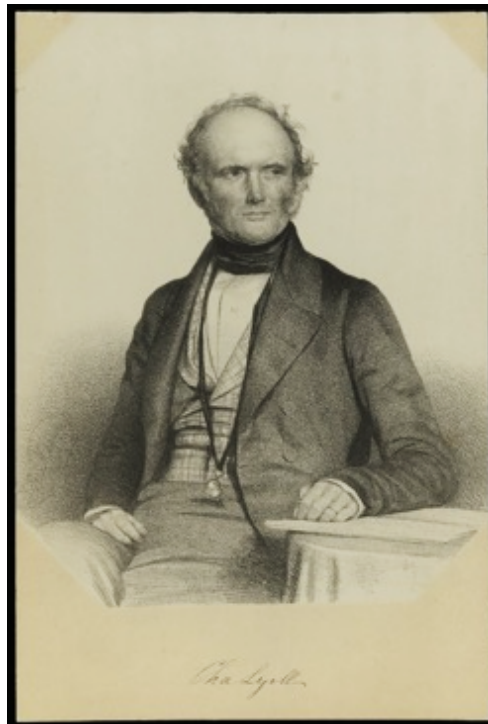




THE UNIVERSITY
of EDINBURGH

‘Working with Charles Lyell’ Workshop

8–9 February 2024



**Welcome to Edinburgh, to the University of Edinburgh,
and to the
'Working with Charles Lyell' Workshop**

Welcome to Edinburgh, to the University of Edinburgh and to St Cecilia's Hall, and to the 'Working with Charles Lyell' Workshop. It is a great pleasure to have you here. The Workshop builds upon several years of work on Lyell's materials by the staff of the University's Centre for Research Collections and in Heritage Collections. We hope that the Workshop will provide an opportunity not only to discuss the work of Lyell and to learn from one another but also, and importantly, that it will help develop further research connections and opportunities.

The archive, specimen collection, and offprints and books owned or annotated by Sir Charles Lyell are held within the University of Edinburgh's Heritage Collections and available for all those interested in Lyell to examine. Traces of Lyell have been part of the University's collections for almost 100 years: in 1927, Lady Lyell gave a tranche of papers and works to the University's Grant Institute (now within the School of Geosciences) which are today in the care of Heritage Collections. Heritage Collections encompasses a wide range of collection types, including rare books, manuscripts and archives, art collections, musical instruments, and the institutional archive. We also support colleagues who manage school-based collections like those at the Cockburn Geological Museum or at the Anatomical Museum. The project on Lyell's materials is supported by our network of librarians, archivists, conservators, and curators who have the media expertise and the connections across and outwith the University to bring Lyell and his work into new spaces. This achievement is the work of many. I particularly thank Pamela McIntyre, Strategic Projects Archivist, and her predecessors (Elaine MacGillivray and Elise Ramsay), as well as the interns and volunteers who have helped manage the Lyell collections and made them available to research and teaching communities, in Edinburgh, across Scotland, and worldwide. Enjoy the Workshop and, again, welcome.

Daryl Green FSAScot
Head of Heritage Collections (Research & Curatorial)
Co-Director of the Centre for Research Collections

Acknowledgement of Funding Support

It is a great pleasure to acknowledge the generous financial support received from several parties towards the Workshop. The organisers would like to thank the Curry Fund of the Geologists' Association for support towards the costs of speakers' travel. The British Society for the History of Science provided a grant in aid of the Workshop and contributed towards the Workshop Reception. For their kind support towards the meeting, we are grateful to Daryl Green and the Centre for Research Collections, Professor Bryne Ngwenya, Dr Gillian McCay, and the School of Geosciences, and Professor Emma Hunter and the School of History, Classics and Archaeology, at the University of Edinburgh. We particularly acknowledge the generous awards made by anonymous donors toward the Workshop.

The University of Edinburgh is a charitable body, registered in Scotland, with registration number SC005336

PROGRAMME

DAY 1 - Thursday 8 February 2024

St Cecilia's Hall, 50 Niddry Street, Edinburgh EH1 1LG

9.15am – 9.25am Welcome and Introductory Remarks (Charlie Withers)

9.30am – 11.00am **Paper session 1:** *Beginning with Notebooks* (Chair: Charlie Withers)

- Pamela McIntyre (University of Edinburgh) **'A journey through time: navigating Charles Lyell's 19th century global database at the University of Edinburgh'**
- Joshua Hillman (University of Leeds) **'The prehistory of the geological field notebook, c. 1690 – 1780'**
- Matthew Eddy (University of Durham) **'Drawing theories together: diagrams as real-time thinking tools in the geological notebooks of Charles Lyell'**
- Tim Fedak (Dalhousie University) **'The significance of Charles Lyell's notebooks and travel in Nova Scotia in the summer of 1842'**

11.00am – 11.30am Coffee/tea

11.30am – 1.00pm **Paper session 2:** *Lyell's Travels in Space and Time* (Chair: Ralph O'Connor)

- Maria Toscano (Warburg Institute, London) **"Time writes": Lyell and the Neapolitan entourage'**
- Will Adams (University of Glasgow) **'An unsolicited authority: Charles Lyell's contribution to the human antiquity debate'**
- Mary Orr (University of St Andrews) **'The French Lyell: debating *The Antiquity of Man* and *L'Homme fossile en France* in 1863–1864'**
- Alison Martin (Johannes Gutenberg Universität-Mainz) **'Reforming geology: Charles Lyell's works in nineteenth-century German translation'**

1.00pm – 2.15pm Lunch at St Cecilia's Hall

2.15pm – 3.45pm **Paper session 3:** *Lessons of Earth History* (Chair: Rebekah Higgitt)

- Susan Newell (University of Oxford) **‘Geological teaching in the early nineteenth century: William Buckland, Lyell’s Oxford lecturer and what Lyell may have learnt from his approach to teaching’**
- Jim Secord (University of Cambridge) **‘Charles Lyell and the singularity of reason’**
- Marika Ceschia (University of Leeds/IASH Fellow, University of Edinburgh) **‘Unsettling the colonial archive: rewriting Charles Lyell’s extractive grammars’**
- Sarah A. Qidwai (University of York/ Universität Regensburg) **‘Charles Lyell’s influence in colonial spaces: a study of John Colenso and Sayyid Ahmad Khan’**

3.45pm – 4.15pm Coffee/tea

Panel Session 1:

4.15pm – 5.30pm ***Combining Lyell’s texts and specimens*** (Chair: Jim Secord)
Gillian McCay (University of Edinburgh), Eliza Howlett (University of Oxford), Liz Smith (University of Cambridge), Consuelo Sendino (National Museum of Natural Sciences, Madrid)

5.30pm – 6.30pm Visit to **The Recent** exhibition (Talbot Rice Gallery, Old College)
The Recent examines the conceptual world of geological, evolutionary, human and environmental time. The geological ruminations that underpin the exhibition are deeply rooted in Edinburgh, where James Hutton, and later Charles Lyell (whose journals and geological specimens feature in the exhibition), developed the theory of ‘deep time’ that is reflected in many of the artists’ works.

6.30pm – 7.45pm **Drinks Reception** (Playfair Library, Old College)
Reception kindly sponsored by the British Society for the History of Science

DAY 2 - Friday 9 February 2024

St Cecilia’s Hall, 50 Niddry Street, Edinburgh EH1 1LG and University Main Library, George Square, Edinburgh, EH8 9LJ

9.30am – 11.00pm **Paper session 4: *The Public and Private Faces of Geology*** (Chair: Aileen Fyfe)

- Felicity Mackenzie (Independent scholar) **‘Charles Lyell’s principles of reform’**
- Jon Topham (University of Leeds) **‘Making geology “useful”: the sciences of the earth and the Society for the Diffusion of Useful Knowledge’**

- Grace Exley (University of Leeds) '**A sisterhood of the hammer?: Mary Horner Lyell and her geological network**'
- '**Introduction to the Lyell Website**' (Pamela McIntyre and Lucy Pennington - University of Edinburgh)

11.00am – 11.30am Coffee/tea

Panel session 2:

11.30pm – 12.30pm ***Furthering Lyell research – opportunities and possibilities***, open discussion chaired by Jim Secord.

12.30pm – 12.45pm **Closing remarks**

12.45pm – 2.00pm Lunch at St Cecilia's Hall, then walk to University Main Library, George Square

2.30pm – 3.30pm **Display of Lyell archival material** (Centre for Research Collections, 6th floor, University Main Library)

3.45pm – 5.00pm **Tour of Lyell Exhibition** (Exhibition Gallery, ground floor, University Main Library)



ABSTRACTS OF PAPERS

Thursday 8 February

Paper session 1: *Beginning with Notebooks*

Pamela McIntyre: ‘A Journey through Time: navigating Charles Lyell’s 19th century global database at the University of Edinburgh’

This paper will set out the practical work undertaken by Heritage Collections since the acquisition of Charles Lyell’s Notebooks in 2019 kick-started a transformative programme of preservation, cataloguing and digitisation aimed to improve discovery and accessibility to his records held at the University. It will explain the different elements that comprise Lyell’s collections, outlining their provenance and purpose. It will present the work done to facilitate access – the challenges, solutions, and future opportunities.

Joshua Hillman: ‘The Prehistory of the Geological Field Notebook, c. 1690–1780’

This paper examines the field notes of four prominent eighteenth-century natural historians: John Woodward, John Strachey, Charles Mason, and Alexander Catcott. I shall argue that these field notes – which have been curiously neglected – can be used to illustrate the ‘prehistory’ of the geological field notebooks used by nineteenth-century geologists like Charles Lyell. I offer two exploratory conclusions: firstly, that geological field notes were initially modelled on medical case histories before emerging as a distinct genre around 1740; and secondly, that we can trace the development of a technique that I call the ‘mental imagining’ of the strata in their pages.

Matthew Eddy: ‘Drawing Theories Together: Diagrams as Realtime Thinking Tools in the Geological Notebooks of Charles Lyell’

Between 1825 and 1830 Charles Lyell kept around 30 notebooks to record his evolving understanding of how stones and landscape provided hints to the geological structure of the globe. The notebooks offer an informative picture of his thought in the years that immediately preceded the publication of his influential *Principles of Geology* in 1830. The paper considers how these notebooks operated as temporal nodes in an evolving manuscript media system that allowed him to draw his geological theories together. I will consider three overarching questions: How might we see the notebooks as media artefacts comprised of different components that displayed scientific information? How do such components offer a way to see the notebooks as workshops of real-time interface through which geological ideas were contemplated? And finally, where might we look for evidence that reveals how Lyell learned to use notebooks in this way as integral media technologies?

Tim Fedak: ‘The Significance of Charles Lyell’s Notebooks and Travels of Nova Scotia in the Summer of 1842’

In July and August 1842, Charles Lyell and his wife Mary spent a month travelling around Nova Scotia to study the region’s geology. The visit was described in detail in the final four chapters of Lyell’s second volume of his *Travels in North America* (1845), in which Lyell said, “I never travelled in any country where my scientific pursuits seemed to be better understood, or were more zealously forwarded, than in Nova Scotia” (p. 230).

To encourage interest and inquiry into the significance of Charles Lyell's visit to Nova Scotia, work was carried out to redraw select illustrations and offer transcriptions of his handwriting of a microfiche scan of Notebook 103. Several of the sites that Lyell visited include the Joggins Fossil Cliffs UNESCO World Heritage Site and the Cliffs of Fundy UNESCO Global Geopark. By providing a summary of the methods and results from studying Notebook 103, I will show how use of redrawing and reference to related archival material provides new insights into the importance of Charles and Mary Lyell's 1842 visit.

Paper session 2: *Lyell's Travels in Space and Time*

Maria Toscano: "TIME WRITES": Lyell and the Neapolitan Entourage'

Lyell was in contact with the Neapolitan famous geologists Teodoro Monticelli and Ferdinando Visconti who corresponded also with Babbage and accompanied them to Vesuvius during their visit. I am trying to highlight the relationships between Lyell and the Neapolitan international entourage, to define the fundamental contribution made by some of its specific ideological and epistemological features to the birth of gradualistic theory; for the long-lasting cyclic and dynamic idea of Nature had been common among those meridional intellectuals since the second half of the eighteenth century, particularly in the circle of scholars around William Hamilton. Their studies also share with Lyell the efficient synergy between scientific, empiric facts and antiquarian sources.

Will Adams: 'An Unsolicited Authority: Charles Lyell's Contribution to the Human Antiquity Debate'

Lyell's last major published work, *The Geological Evidence of the Antiquity of Man*, was subject to criticism from its release. Claims of Lyell's illegitimate acquisition of results from other researchers' work made it necessary to evaluate these claims in assessing Lyell's contribution to the human antiquity debate. Lyell's notebooks, and correspondence contained within the Charles Lyell Collection were analysed. Six flint implements from the Cockburn Geological Museum and the Vere Gordon Childe Collection (University of Edinburgh) were studied by creating object biographies and were directly connected to Lyell. Study of the notebooks, correspondence, and objects together show that although he did not plagiarise, Lyell did not acquire his information through original research and that he relied heavily on others' work. Lyell's main role in debates on human antiquity was in authenticating other researchers' work through his established credibility and in presenting their arguments in a powerful narrative which persuaded fellow scientists and the public.

Mary Orr: 'The French Lyell: Debating *The Antiquity of Man* and *L'Homme fossile en France* in 1863–1864'

This paper focuses on the importance of Lyell's work(s) in France, especially in the early 1860s when French préhistoire was established as a major (inter)national scientific endeavour. Immediate French translation of Lyell's *Geological Evidences of the Antiquity of Man* (1863) also illuminates its larger significance, namely in Lyell's 'Appendice' to the collection of major papers published in 1864 by France's leading 'prehistorians' as *L'Homme fossile en France*. To pitch for 'the French Lyell' is therefore to investigate how his French 'Appendice' addresses and/or resets cross-Channel debates on the roles of geology in the dating of the Homo genus.

Alison Martin: ‘Reforming Geology: Charles Lyell’s Works in Nineteenth-Century German Translation’

While Charles Lyell is rightly considered one of the greatest public figures in Victorian science at mid-century, to date scant attention has been paid to the conduits through which his work acquired European recognition. Different nationally determined scientific cultures made works of “popular” science, such as Lyell’s *Elements of Geology* (London, 1838), challenging to translate and tailor to the expectations of a foreign readership. Geology, by necessity the product of localized research, was thus doubly difficult to make appealing to an audience situated in a different country and culture.

Taking as a case study the German translation of the *Elements*, overseen by Bernhard Cotta, professor of geology at the renowned Bergakademie (Mining Academy) in Freiberg, the paper explores how material appended to the translation brought Lyell’s work into dialogue with German earth scientists of the period. In his preface to *Geologie, oder Entwicklungsgeschichte der Erde und ihrer Bewohner* (Berlin, 1857) Cotta cast Lyell as the “Reformator der Geologie”, a figure of the same reformatory power as Martin Luther, while recognizing that much still remained a matter of debate. Particularly intriguing is Cotta’s assertion that the publication of the German translation was itself a driver for a new, revised version in English – ultimately the sixth London edition, published in 1865. Translation therefore prompted processes of rethinking and reshaping which remind us that scientific texts are themselves unstable, evolving works.

Friday 9 February

Paper session 3: *Lessons of Earth History*

Susan Newell: ‘Geological Teaching in the Early Nineteenth Century: William Buckland, Lyell’s Oxford Lecturer and What Lyell May Have Learnt from His Approach to Teaching’

In 1817 and 1818 Lyell signed up for Buckland’s Mineralogy Course at the University of Oxford. He subsequently frequently attended Buckland’s presentations to the Geological Society of London and, from 1832, the British Association for the Advancement of Science. This paper presents new research on Buckland’s teaching and his careful preparations for lectures, including his field collecting and use of specimens, his commission of illustrations, purchase of models, and lecture room organisation. The aim is to consider and invite views from delegates on how Buckland’s lecturing style may have later impacted Lyell’s practices in communicating geological knowledge.

Jim Secord: ‘Charles Lyell and the Singularity of Reason’

The only significant marker in Lyell’s history of the Earth is the advent of human reason. Throughout his travels Lyell observed human social life to understand the boundaries of reason and its capacity for development. In the *Principles of Geology*, reason separates humans from animals and defines the era of progress (‘the Recent’) from the preceding ages of random, meaningless change. It also serves as the linchpin of his argument against human-induced climate change. Even after Lyell reluctantly adopted a view of geological progress in the wake of the *Origin of Species*, and accepted that humans might be altering the world around them in

unprecedented ways, he continued to believe that reason rendered humans special. This paper explores Lyell's view of human reason and its practical, philosophical, and religious sources.

Marika Ceschia: 'Unsettling the Colonial Archive: Rewriting Charles Lyell's Extractive Grammars'

In this paper I aim to analyse the erasures present in Scottish geologist Charles Lyell's nineteenth-century American-related notebooks to understand the complex entanglements between colonialist praxes of terra- and subject-forming. What onto-epistemological assumptions link Lyell's explorations of the natural and social environment of the Americas? Employing a theoretical framework informed by the insights of Black women's writings, I want to begin to develop a novel way to look at the archive to unsettle the mechanisms that brought about a colonialist way of seeing the world based upon exploitative dynamics. Analysing Lyell's American-related notebooks, I aim to uncover what Kathryn Yusoff has called the "extractive grammars of geology," which enable "a transmutation [...] that renders matter as property," severing its embeddedness in sociological and ecological fields. Revealing the ways in which the matricidal praxes foundational to the ontological transmutations of the Plantationocene uphold geology's extractive grammars, I aim to demonstrate how they work to perpetuate colonialist epistemologies. I will explore how maternal erasure functions to create a colonialist subtext in the semiotics of geology: what role does maternal erasure play in the constitution of geology as a scientific discourse that, willingly or not, perpetuates racial logics? How does it enable the transformation of matter into property?

Sarah A. Qidwai: 'Charles Lyell's Influence in Colonial Spaces: A Study of John Colenso and Sayyid Ahmad Khan'

The paper examines Charles Lyell's impact in nineteenth-century colonial spaces, focusing on John Colenso, an Anglican bishop in Natal, and Muslim scholar Sayyid Ahmad Khan. Colenso, influenced by Lyell's *Principles of Geology*, integrated geological principles into biblical criticism, challenging traditional interpretations. Sayyid Ahmad Khan, active in British India, criticized Colenso in his Bible commentary, reflecting the transmission of Lyell's ideas to colonial South Asia. This research illuminates the interconnectedness of intellectual developments across geographies, showing how Lyell's scientific ideas influenced religious thinkers in diverse contexts, contributing to the ongoing dialogue between science, imperialism, and theology during this pivotal period.

Paper session 4: *The Public and Private Faces of Geology*

Felicity Mackenzie: 'Charles Lyell's Principles of Reform'

Charles Lyell is famous for being a hugely influential geologist. I will argue that to examine Lyell's early writing in the *Quarterly Review* (1826–1827) alongside his position in elite London society, lifelong participation in educational reform and political commentary about America offers the opportunity to reconsider Lyell's identity and reframe his geological career. Lyell begins to emerge as a literary gentleman and educational reformer operating at the intersection of Scottish Enlightenment political and scientific theory who saw his geology as an important 'civilising' tool by which he might forward reform in both the sciences and society.

Jon Topham: ‘Making Geology “Useful”’: The Sciences of the Earth and the Society for the Diffusion of Useful Knowledge’

Founded in 1826, the Society for the Diffusion of Useful Knowledge sought to place the sciences centre stage in transforming British society through the production of cheap publications. From the start, geology had a prominent place in the plan, but despite promises from leading geologists, the treatises initially planned never appeared. Subsequently, however, other publications including the society’s cheap *Penny Magazine*, its *Penny Cyclopaedia*, and its series of maps all came to offer readers authoritative accounts of geology by leading contributors. This paper explores these ups and downs of the society’s attempts to make geology “useful knowledge” in Lyell’s heyday.

Grace Exley: ‘A Sisterhood of the Hammer?: Mary Horner Lyell and Her Geological Network’

Mary Horner Lyell was well-connected. Travelling with her husband, organising social gatherings, and corresponding with male and female contemporaries, including Charles Darwin and Elizabeth Agassiz, she was integrated into the overlapping social and scientific communities of nineteenth-century geology. However, historians of science have primarily studied men’s networks. Consequently, this paper uses correspondence and notebooks (including the Lyell notebooks) to reconstruct Mary’s geological and social networks. I argue that there existed a network of geological women – a sisterhood of the hammer, of which Mary was part – which sheds new light on both the practice and the practitioners of nineteenth-century geology.

University of Edinburgh Central Campus

St Cecilia's Hall = 45

Old College (Playfair Library & Talbot Rice Gallery) = 41

University Main Library = 20

