

EARLY CAREER RESEARCHER SYMPOSIUM 2025

SOCIETY FOR THE HISTORY OF NATURAL HISTORY



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Cover Image

Georg Dionysius Ehret, *Cactus Cereus*.
Watercolour and gouache on vellum, c.1750.
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PROGRAMME

10:55 AM

Welcome

11:00 AM

Session One

Tracing the Journey of American Cacti in China
Cynthia ST Yeung, KU Leuven, Belgium

From Local Collectors to Global Science: Hidden Histories of the Kew Herbarium
John Schaefer, University of Cambridge in collaboration with the Royal Botanic Gardens, Kew, United Kingdom.

Language of flowers? An alternative perspective. Plant names in botanical paintings, a tool for communication and cultural obfuscation.
Charlotte Brooks, Royal Horticultural Society's Lindley Library and Queen Mary University of London, United Kingdom

12:30 PM

Lunch

1:30 PM

Session Two

The Long Shadow of Linnaeus: Luke Howard's Cloud Nomenclature and the Natural History of the Sky, 1802-1820
Brian S.-K. Li, University of Cambridge, United Kingdom

Cutting Peat: The Historical Ecology and Dissection of the Chat Moss Ecosystem
Andrew Osbourne, Manchester Metropolitan University, United Kingdom

When Music Tamed the Beasts: Animal responses to Music in the Early Modern Period.
Tasio Rodrigo, Autonomous University of Barcelona, Spain

PROGRAMME

3:00 PM

Break

3:30 PM

Session Three

Hare, Hyrax, and Hart: Biblical Natural History and Hermeneutics in British Expeditions to the Holy Land, 1863-1884

Theo Detweiler, University of Cambridge, United Kingdom

Anachronisms in the History of (Natural) Science. The Secret Face of Isaac Newton

Matteo Costa, Sapienza University of Rome, Italy

Beyond the Collection: Race and the Circulation Regime of Animal Brains in the French and British Empire (1770-1850)

Maxime Guttin, European University Institute, Florence, Italy

5:00 PM

Closing Remarks

SESSION ONE

Tracing the Journey of American Cacti in China

Cynthia ST Yeung, KU Leuven, Belgium

This paper traces the transpacific distribution of cacti from the Americas to China, focusing on their introduction, adoption, and integration into Chinese botanical and medical systems between the 16th and early 19th centuries. During this period, the Spanish Manila galleon trade played a key role in facilitating the transfer of plants, reshaping global biological landscapes. In the Americas, particularly in Mexico, cacti were deeply embedded in local cultures, ecosystems, and medical practices. Among the cacti, *Opuntia* was notable for its economic role in sustaining the cochineal industry, a critical component of Spanish colonial trade due to the insect's use in producing red dye.

After reaching the Spanish-controlled Philippines, these cacti, along with associated knowledge, spread throughout Asia through existing trade networks. In China, cacti were gradually assimilated into local biological and medical frameworks, leading to new understandings and knowledge that were subsequently adopted by other regions. This paper focuses on exploring these complex, but overlooked, biological and cultural exchanges. By analyzing textual additions and omissions, I aim to uncover the routes of plant diffusion and the concurrent exchange of botanical knowledge between the Americas and China. The transpacific journey of cacti offers novel perspectives on the cultural, economic, and environmental impact of this exchange and exemplifies the intricate dynamics of global natural history in the early modern period.

Speaker biography

Cynthia is currently a PhD candidate at KU Leuven, working as part of the ERC Advanced Grant Transpacific project. Her research focuses on historical documentation related to the use and circulation of plants, herbs, medicines, and diseases introduced from the 'New World' to coastal China. She examines the transpacific journey of these plants and their integration into Chinese botanical and medical systems, highlighting their cultural, economic, and ecological impacts on local societies between the 16th and 19th centuries.

SESSION ONE

From Local Collectors to Global Science: Hidden Histories of the Kew Herbarium

John Schaefer, University of Cambridge in collaboration with the Royal Botanic Gardens, Kew, United Kingdom

This paper examines the interplay of science and globalisation through nineteenth-century British plant specimen exchange, focusing on the herbarium of the Royal Botanic Gardens, Kew as a key case study. Applying social network analysis as an exploratory lens illuminates the overlooked contributions of local collectors, labourers, and intermediaries in the transcontinental movement of plants and knowledge.

Central to imperial science, the Kew Herbarium housed plant specimens acquired through colonial networks, representing complex relationships and power dynamics. Yet historical narratives often privilege figures like William Hooker, his son Joseph Hooker, and Joseph's son-in-law William Thiselton-Dyer, whose combined directorships from 1841 to 1905 marked a period of significant expansion and collecting activity at Kew. By decentering these figures, this study maps the broader networks of individuals and institutions underpinning botanical exchange. A focus on nineteenth-century Australian plant-collecting networks underscores the interdependence of these colonial actors, who both navigated and actively contributed to evolving nomenclatural and classificatory systems.

Combining archival research with social network analysis, the study explores transcontinental patterns of plant collecting, leveraging specimen label data to visualise connections between collectors. Network analysis thus provides a guided means of reading, and conversely, close reading informs the development of more nuanced and focused quantitative approaches in the history of science. Foregrounding the contributions of local collectors, horticulturalists, and other intermediaries, this paper challenges the perception of Kew as the sole locus of British botanical progress and illustrates how the digitisation of scientific plant specimens yields a novel lens for surveying Kew's colonial archives.

Speaker biography

John Schaefer is a PhD student in History and Philosophy of Science at the University of Cambridge, working in collaboration with the Royal Botanic Gardens, Kew. His research focuses on the history of botany, empire, and plant collecting, with a particular emphasis on integrating digital humanities methods. As a 2024 U.S. Fulbright Scholar, John explored these themes in the Australian context at Western Sydney University. His doctoral project now reconstructs and analyses the social networks of colonial plant collectors in the late nineteenth century, using Kew Herbarium specimen data to explore the global dynamics of plant and knowledge exchange.

SESSION ONE

Language of flowers? An alternative perspective. Plant names in botanical paintings, a tool for communication and cultural obfuscation.

Charlotte Brooks, Royal Horticultural Society's Lindley Library and Queen Mary University of London, United Kingdom

The RHS Reeves collection of nineteenth century Anglo-Chinese botanical watercolours, sits within a network of 'copy' paintings of similar artworks now found in dispersed collections around the world. Initially commissioned and collected in Canton (Guangzhou) as part of the impetus to document new plant acquisitions sought for British gardens, the paintings served as a conduit between Chinese and British merchants, where pictorial representation was a common language.

Apparently identical paintings embody multiple layers of language and interpretation. Visually the paintings are typical of codified botanical representation, as understood by European audiences. Inscriptions by different hands hint at their history and purpose. Local Chinese dialect plant names offer cultural insights and re-orient the paintings to their Chinese heritage. Sitting alongside often clumsy European transliteration, before the introduction of Pinyin, are the first attempts at a Latin name designation, which represent the transfer away from cultural representation to scientific evidence. The eventual re-naming of these plants to sit within a framework of botanical taxonomy, has obscured embedded local Chinese plant knowledge. An analysis of specific paintings shows how the documentation process in heritage collections has perpetuated this obfuscation, with a call to include local plant names in future documentation, where possible.

Speaker biography

Charlotte Brooks is the Art Curator at the Royal Horticultural Society's Lindley Library in London, where she has worked with the botanical art collections for over 20 years. With a long-held interest in nineteenth century Chinese botanical paintings, she recently started a PhD at Queen Mary University of London, under the supervision of Dr Richard Coulton. Recent publications include: *RHS Botanical Illustration: The Gold medal winners* (ACC Art Books, 2019) and *RHS Orchids: A History through Botanical Illustration* (ACC Art Books, 2022).

SESSION TWO

The Long Shadow of Linnaeus: Luke Howard's Cloud Nomenclature and the Natural History of the Sky, 1802–1820

Brian S.-K. Li, University of Cambridge, United Kingdom

This paper reframes Luke Howard's 1802 cloud nomenclature, which continues to serve as the basis of cloud nomenclature today, as an undertaking aligned with the stylistic and epistemological objectives of Linnaean natural history. In doing so, Howard sought to professionalize and standardize the field of meteorology which, at the turn of the nineteenth century, was not regarded as a "proper" science by practitioners of other fields. Howard's Latinized nomenclature, which coined such terms as "cumulus" and "cirrus," presented two features of interest. First, it was likely modeled on Latinized names in Linnaean natural history. Second, because Latin had become rather outdated by Howard's time, reputational motives likely justified his anachronistic language choice. Through an analysis of Howard's "On the Modifications of Clouds" and the revisions it underwent throughout the early nineteenth century, this paper argues that Howard's Latinizations provided early meteorologists with an argot that scaffolded a mature discourse community. In doing so, meteorology could furnish proof of its linguistic and methodological proximity to the established field of natural history. The deliberate unfamiliarity of Latin also enabled the abstractive power of his nomenclature, which could supposedly distill protean cloud forms into seven categories that could then be deployed in consistent and, more importantly to Howard, credible accounts of atmospheric phenomena. Just as Linnaean Latin sought to create a lingua franca for botany, Howard's appropriated the supposed neutrality and detachedness of Latin to therefore enable the creation of what he later termed a "natural history of clouds."

Speaker biography

Brian S.-K. Li is an MPhil student in the Department of History and Philosophy of Science at the University of Cambridge. He holds an AB in Comparative Literature from Princeton University. His work generally revolves around pre-modern science and medicine, along with their intersections with literature and rhetoric. He is particularly interested in how language and translation influenced perceptions of scientific and medical practitioners in the public consciousness.

SESSION TWO

Cutting Peat: The Historical Ecology and Dissection of the Chat Moss Ecosystem

Andrew Osbourne, Manchester Metropolitan University, United Kingdom

Peatland is a biotope of international importance, because of its unique flora and fauna and, when in good condition, the potential for globally significant carbon sequestration and storage. Chat Moss is situated between major urban areas in the northwest of England at the epicentre of the Industrial Revolution and was completely destroyed through a combination of drainage, peat cutting, conversion to agriculture, urban development and pollution. The area is currently the site of a landscape scale ecosystem restoration programme.

Chat Moss was originally an impenetrable wilderness over 36 square kilometres in area, a lowland raised bog rising 10–12 m above the surrounding land. Using historical maps, books, illustrations, old place-names and biological recordings it is possible to chart the impact of the Industrial Revolution on the peatland over the past 200 years and trace the origins of the ecosystem back to the late Holocene, providing insight into magnitude, timeframe and mechanisms of the destruction.

During the nineteenth century Merseyside and south Lancashire were one of the UK's largest generators of sulphur pollution due to unregulated chemical works employing the Leblanc alkali process. The resulting acid rain contributed to the habitat degradation and loss of Sphagnum moss on the neighbouring lowland peatlands. The impact of the air pollution precipitated early health and environmental legislation and the formation of the Alkali Inspectorate.

Gaining a clear picture of this landscape's baseline condition, as well as the factors responsible for habitat degradation, is essential for informing habitat restoration efforts and species reintroduction programmes.

Speaker biography

I am a long-term volunteer with Lancashire Wildlife Trust and a PhD student at Manchester Metropolitan University. I have been involved with peatland restoration on Chat Moss for the past eight years, working mainly on landscape restoration and plant species reintroductions on Little Woollen Moss, a previous peat extraction site which is now a thriving nature reserve. My research project is based around the reintroduction of the large heath butterfly and is mainly concerned with defining the insect's habitat resource requirements to optimise the chances of long-term success of the species reintroduction.

SESSION TWO

When Music Tamed the Beasts: Animal responses to Music in the Early Modern Period

Tasio Rodrigo, Autonomous University of Barcelona, Spain

The phrase “music tames the beasts” is not merely a popular saying. References to animals mysteriously affected by music can be found in both natural history texts and treatises on music theory in the Early Modern period. How is it possible that irrational creatures were found to appreciate music - a supposed system of numerical relationships taught in the quadrivium? How was musical perception understood during this era?

Some authors of the 17th and 18th centuries provided answers to all these questions. They were working with and long tradition of music-sensitive animals, such as dolphins or deer, once described by Plinio. However, what happened when the new American animals came in the scene? How did the beliefs associated to European species condition the way they viewed the new ones? Was there a transfusion of indigenous mythologies into European thought? This presentation explores the exchange of knowledge between natural history and music theory at the time.

Speaker biography

My name is Tasio Rodrigo. I hold a degree in Musicology from the University of Salamanca, Spain. I completed my master's degree at the Institute for the History of Science at the Autonomous University of Barcelona, and I am currently working on my PhD, at the same institution. I am also conducting a research stay at the CEIIICH (Centre for Interdisciplinary Research in Science and Humanities) at the National Autonomous University of México.

SESSION THREE

Hare, Hyrax, and Hart: Biblical Natural History and Hermeneutics in British Expeditions to the Holy Land, 1863–1884

Theo Detweiler, University of Cambridge, United Kingdom

The history of science remembers Henry Baker Tristram as an early adopter of Darwinism whose interests as a clergyman overtook his commitment to science following the 1860 Huxley-Wilberforce debate on evolution. Yet Tristram's most notable contributions to natural history and to the relationship between religion and science came after the 1860 debate, through his research on the fauna of Palestine and his founding role in the Palestine Exploration Fund. This paper draws on published works and the unpublished correspondences of Tristram and his fellow naturalists of the Palestine Exploration Fund to shed much needed light on the history of natural history in the nineteenth-century Levant. Reproducing obscure debates on the identity of biblical mammals — the 'conies' and 'deer' of the King James Bible — the paper assesses the role of biblical natural history in late Victorian clerical and scientific debates. It argues that the primary target of Tristram's Christian science was not Darwinism, but the 'higher criticism' of Bishop John Colenso. By applying contemporary zoology and philology toward the interpretation of scripture, Tristram and his colleagues defended the authorial authenticity of the Hebrew Bible and the enduring relationship between Christianity and science. Despite the varied priorities of the PEF's founders, the institution's naturalists united in effort to properly identify biblical mammals in the contemporary fauna of Ottoman Palestine. By inscribing these meanings onto the living flora of Ottoman Palestine, PEF naturalists created an evidentiary terrain on which Christian scripture was corroborated, and the relationship between Victorian science and religion was negotiated.

Speaker biography

Theo Detweiler is a MPhil student in the History and Philosophy of Science at the University of Cambridge. He is a recent graduate of Williams College in Massachusetts, where he earned a B.A. in History and Arabic. His research concerns the relationship between the natural sciences, empire, and the study of the past in the modern Middle East.

SESSION THREE

Anachronisms in the History of (Natural) Science: The Secret Face of Isaac Newton

Matteo Costa, Sapienza University of Rome, Italy

Until a few decades ago, it was widely believed that the period of the so-called “Scientific Revolution” had introduced a radical caesura within the way of considering (natural) science and (natural) philosophy compared to the previous tradition, definitively consecrating the rational scientific method and discarding all those magical, theological and alchemical approaches that had impregnated the scientific *modus operandi* up to that time. Indeed, even today we tend to consider the growth of the modern scientific movement as one of the main manifestations of that process of demystification of the worldview that characterized the XVII century. However, some research conducted in recent decades has shown that this belief is false or, at the very least, inappropriate: if one studies this period closely, one can indeed identify numerous historiographical errors arising from the application of anachronistic or a posteriori categories, which are part of the achievements and theoretical-conceptual developments of a later tradition, which looks at the past by filtering it through lenses that are inadequate. Thus, the aim of my paper will be as follows: to demonstrate and restore the complexity of the figure of Isaac Newton and to identify the purpose and importance that alchemical and theological studies had within his natural research. As I will demonstrate, indeed, the contradiction between “Newton the Alchemist” and “Newton the Modern Scientist” disappears if we do not apply to him anachronistic categories such as “science” and “scientist”, returning a holistic image of him as a perfect natural philosopher of his own time, that is closer to the truth.

Speaker biography

I am Matteo Costa, a first year PhD student currently enrolled in the Department of Philosophy at Sapienza University of Rome, with a project on serendipity and scientific discovery. I graduated from the University of Pavia in 2022 with a Bachelor of Philosophy and a specialization in Philosophy of Time, and then in 2024 I obtained my Master’s degree in Philosophy, after a five-month Erasmus research period at the University of Cambridge, with a thesis on Newton, where I analyzed his alchemical and theological research. As you can understand, I am interested in both History and Philosophy of (Natural) Science.

SESSION THREE

Beyond the Collection: Race and the Circulation Regime of Animal Brains in the French and British Empire (1770–1850)

Maxime Guttin, European University Institute, Florence, Italy

From the late 18th century onwards, naturalists in the French and British empires would use brain studies to construct racial hierarchisations. Within the scholarly literature of the “natural history of human races”, the brain gradually became an important marker, sign and cause of anthropological differences. The presence of this organ in European museums, naturalists' collections, and their catalogues indicates that this constructed knowledge about race, at the crossroads of natural history and medicine, was partly founded on the comparative study of animal and human brains.

However, until the mid-19th century, only the collections with colonial networks would have animal brains from extra-European territories. While skulls could be more easily collected, transported and exhibited, brains appeared as unstable organic soft masses, difficult to extract, uneasy to conserve and precarious to transport. Yet, the relative absence of these animal brains, and thus of what would constitute evidence in the making of racial differences, did not seem to have prevented scholars from constructing this organ as a site to project racial hierarchisations.

In this presentation, I intend to look beyond museum shelves and assess the provenance of these animal brains by looking at their collection, transportation, dissection and exhibition. By looking at natural history and medical treatises, travelogues and instructions for collectors, I argue that frictions and scarcity characterised the brain's circulation regime. I also argue that, in turn, it shaped how the brain was mobilized as evidence within the “natural history of human races”.

Speaker biography

Maxime Guttin is currently a PhD student at the European University Institute in Florence, Italy. Under the supervision of Lauren Kassell, he works on how the brain, from the last quarter of the 18th to the mid-19th century in the French and British empires, was constructed for the making and justification of racial differences, notably in connection to differences of gender, animality, and pathology. His interests are medical history, the history of race, animal history, the history of colonialism and the history of mental diseases.



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