

Panel 1

A Bird in the Hand: Painting feathers and Feather painting.

Victoria Dickenson, McGill Library and Collections, Montréal, Canada

In August 1759 the English artist-naturalist George Edwards (1694-1773) received a Hoopoe, “shot in the neighbourhood of London”. An etching of an abstracted and rather lifeless Hoopoe appeared five years later in his book *Gleanings of Natural History* (part 3, 345). In the Blacker Wood Natural History Collection at McGill is the record of another kind of interaction with the Hoopoe. Edwards laid the dead bird on a piece of paper and traced its outline in green paint, an image of that bird in all its particularity, its size, its feathers, its awkward shape splayed out on the page. He counted the coverts, separated the tail feathers, studied the colours, and wrote a description of the feathering in ink on the same sheet. Edwards *handled* that bird.

This slight outline of the Hoopoe brings me to something almost forgotten when we look at birds rendered on paper. Naturalists and artists handled their subjects; they ruffled their feathers. The process of sketching, engraving or etching erases the tactility of the bird body, the spikiness and softness of feathers. I want to explore how handling bird bodies, in particular feathers, informed the work of artists and naturalists, and how for some 18th-century artists, the feathers themselves became the medium for representation.

Biography

Victoria is Professor of Practice, Rare Books and Special Collections, McGill Library. She has a PhD in the history of science (Carleton 1995) and has published extensively in the history of natural history. A former museum curator and director, she also writes in the areas of museum studies and material culture. Since 2017, Dickenson has been Principal Investigator on three research projects funded by the Social Sciences and Humanities Research Council of Canada and based on materials held at the Blacker Wood Natural History Collection, founded by Casey Wood.

Sense and Suitability: Delimiting “Temperate” in Clime and Place.

Brooke Penaloza-Patzak, Dept. II at the Max Planck Institute for the History of Science in Berlin, Germany, and Research Associate at the International Research Center for Cultural Studies (ifk) in Vienna, Austria.

By the mid-18th century weather and climate, its aggregate, had become objectively quantifiable phenomena comprised of myriad factors: temperature, humidity, air pressure, etcetera. This notwithstanding, individual’s sensory perception of these phenomena remained inexorably subjective, hinged on an elaborate constellation of, among other things, body mass, health, gender, mood, personal experience and cultural background. This paper brings the recently coined concept of “temperate normativity” into conversation with the history of biogeography to sketch out a new project designed establish and analyze the sensory norms which coalesced to define the bounds of “temperate” climate in the 19th and early 20th century European and Euro-American scientific imaginaries. Conceived as part of the movement to decolonize climate, this research also explores how these norms informed the global-scale demarcation of temperate biogeographic regions, and intersected with early biological investigations to promote environmentally deterministic and Euronormative theories about what constituted “normal” plant and animal growth, development, and proliferation.

Biography

Brooke Penaloza-Patzak is a Postdoctoral Research Fellow in Dept. II at the Max Planck Institute for the History of Science in Berlin, Germany, and Research Associate at the International Research Center for Cultural Studies (ifk) in Vienna, Austria. Her work centers on the late 18th to early 20th production and naturalization of Euronormative hierarchies of human and more-than-human difference; the practical and epistemic labor involved in invoking physical things—from living and once living organisms to objects of culture—as evidence of those hierarchies; and the social and economic circumstances that undergird these ways of knowing and making knowledge.

Panel 2

Sound Worlds in German 19th-Century Natural History Texts.

Anna Hehl, Humboldt University, Berlin and Cardiff University, Wales.

Before the advent of audio recording technologies, the auditory experiences of natural spaces and their more-than-human inhabitants were characterised by an inevitable fleetingness and irreproducibility. Nature sounds could – often in hindsight – only be captured in the form of written text or musical notation by those, who paid close attention to natural processes and/ or had considerable knowledge about the acoustics properties of places and animals. Poets of German Romanticism made extensive use of nature sounds and shaped the ideas society had about them over the following decades. Throughout the 19th century a substantial amount of historical traces of nature sounds can be found in non-fiction texts by naturalists, scientists and early conservationists. By analysing these, I show in my talk how, in continuity with the tradition of the complex, layered history of the uses of natural sounds in writing, authors sought as well to evoke feelings of affection and longing in their audience by specifically pointing to nature sounds. Driven by the visible and audible loss of species and accompanied by feelings of fear, authors tried to restore a connection allegedly lost between nature and humans and hence further shaped the collective memory of species, natural spaces and national identity.

Biography

Anne (*1989) earned her Bachelor's and Master's degree in German Studies and Literature at the Justus Liebig University of Giessen, Germany, where she focused on literature of Weimar Classicism, Expressionism and early 20th century German literature. From August 2022 to August 2025, she holds a position as PhD researcher in the project "The Sound of Nature – Soundscapes and Environmental Awareness 1750-1950", hosted by the Humboldt University Berlin and Cardiff University. The analysis of natural acoustic phenomena in 19th century texts, the ways in which they reinforced or undermined popular (post-)romantic notions of nature are the main issue of her doctoral thesis.

Recording the sounds of nature.

Cheryl Tipp, British Library

Sound plays a critical role in the lives of animals. From songs and drumming to stridulation and echolocation, sound is used by individuals to attract mates, protect territories, issue warnings, navigate through challenging environments and maintain contact with each other. Despite being a fundamental sense for so many species, it wasn't until the 19th Century that the ability to record and playback these sounds became a reality. For the first time, naturalists had the tools to accurately document the wide variety of sounds produced by animals and no longer had to rely solely on subjective methods such as written descriptions or musical interpretations. This technological leap would transform our knowledge of how animals use sound to interact with the world around them.

The 20th Century saw a proliferation of wildlife sound recordings as technologies progressed and challenges were overcome. As recordists began to build up extensive personal archives, a need arose for centralised collections where people could both deposit their recordings for long term care and access content to further their research. This paper will focus on the British Library sound archive which holds one of the largest and most comprehensive collections of wildlife and environmental sounds in the world. It will explore the wildlife section's role in collecting, preserving and making available over 300,000 natural history sound recordings for scientific research, creative reuse and simple enjoyment. It will also highlight examples of where sound recording has been crucial in uncovering previously unknown aspects of animal behaviour.

Biography

Cheryl Tipp is Curator of Wildlife and Environmental Sounds at the British Library. For the past 20 years Cheryl has curated one of the world's oldest and most important collections of natural history sound recordings. She has written extensively on the history of wildlife sound recording, early recording pioneers and the importance of sound in creating long lasting connections with the natural world. In 2023, she co-curated the British Library exhibition *Animals: art, science and sound* and co-authored the accompanying publication of the same name.

Panel 3

Colours of Nature, Pleasure of Natural History: Blackberry Excursion of Mount School Girls.

JIANG Hong, 姜虹, Department of World History, Sichuan University and Durham University, England.

Blackberrying is a traditional activity in late summer and autumn in Britain. This paper examines the natural history practices of teenage Quaker girls during the annual "Blackberry Excursion" of the Mount School York, in the Victorian period and the first half of the twentieth century. I argue that both blackberrying and the Mount girls' natural history were multisensory experiences in nature. I highlight the sense of sight, not only in observing nature and displaying their natural history collections, but also in their visual representations. I also emphasise the pleasure of amateur natural history. I structure this paper by "colour", a key element of visual perception. Beginning with the "purple stain" left by blackberry juice, I examine how blackberrying cultivated girls' observational skills through sensory experiences and mother lore during childhood, so that they got better prepared for field natural history. I then move to "autumn tints" of the blackberry season, featured with tinted leaves, colourful fungi and diversified seed vessels, which were among girls' natural history collections. They displayed these collections and the berries they picked on the subsequent exhibition. Finally, I come to the "Mount girls' palette" to analyse how they accurately depicted species and evocatively recorded the "Blackberry Excursion" event with their brushes. These images tell a visual history of natural history and the pleasure of natural history. Through these sensory experiences during and after the blackberry excursion, the girls strengthened the community ties and pursued science, both consistent with Quaker values.

Biography

I am an associate professor at Sichuan University and a visiting scholar at Durham University (2024-25). As an amateur naturalist and a historian of natural history, I am especially interested in women naturalists and gender issues in natural history. I have published both Chinese and English articles, book reviews and interviews of scholars. My recent writing on the birdwatcher in Sichuan, China, Jane Dye (1886-1976) is forthcoming in *Archives of Natural History*. I translated Ann Shteir's *Cultivating*

Women, Cultivating Science, Londa Schiebinger's *Plants and Empire*, Bernard Lightman's *Victorian Popularizers* and Alexandra Cook's *Jean-Jacques Rousseau and botany* (forthcoming) into Chinese.

“This appears to be quite a new discovery, unknown to any naturalist”: Microscopy and the Illumination of Natural Knowledge in Georgian England.

Emily Whittingham, University of York, England.

The Western Library is home to a bundle of notebooks penned by Thomas Kerrich (1748-1828) – the English clergyman, antiquary, and artist. While Kerrich's notebooks dedicate themselves to a vast array of topics, this paper will focus on two notebooks which contain descriptions of Kerrich's microscopic experiments, illustrations of the specimens he observed, and reflective passages that explored the intellectual significance of his discoveries. Thus, the notebooks act as an expression of Kerrich's antiquarian interest in collecting natural knowledge, evidencing a culture of amateur natural philosophy in the late eighteenth and early-nineteenth centuries.

This paper will analyse the language and images Kerrich used to describe the microscopic world to consider how magnification impacted the collection and dissemination of natural knowledge in Georgian England. The paper will situate Kerrich's illustrations within the wider context of visibility, illusion, and illumination in Georgian England to explore how the sub-visible nature of microscopy spoke to a wider tradition of dramatic reveal. It will consider how the visualisation of the microscopic world interacted with a contemporary zeal for theatrics and phantasmagoria to discuss the relationship between recreational microscopy, optical illusion, and the sharing of scientific knowledge in Georgian England. It will emphasise how amateur natural philosophers saw themselves as serious contributors to microscopic knowledge and argue that the microscope encouraged Georgians to connect optical illusions to the discovery of serious intellectual knowledge. Ultimately, this paper will use a case study that is absent from scholarly discourse to reassess the construction of scientific authority in Georgian England.

Biography

I am a PhD student at the University of York specialising in the history of science and medicine in early modern and eighteenth-century England. My project, currently titled *Animalcular articulations of bodily sickness and health*, is funded by the White Rose College of Arts and Humanities (WRoCAH) and aims to examine how the microscopic reveal of invisible entities impacted contemporary perceptions of self. Before my PhD, I completed an MA in Medical Humanities at the University of York with a distinction and read BA History at the University of Cambridge.

Panel 4

“This whole world of wild, natural perfumes”. Attention to the Olfactory in 19th-Century North-American Nature Writing.

Clara Muller, independent scholar.

While 18th-century naturalists commonly documented the emanations of plants and animals, references to smell have become increasingly rare in natural history treatises since the 19th century, and are virtually absent from modern field guides which have long been predominantly ocularcentric. The subjectivity of olfactory experience has been regarded as problematic in natural history, and in sciences in general. Linnaeus himself, although he proposed a categorization of plant odours, wrote in *Systema naturæ* (1735) that “odour never clearly distinguishes the species” and that “of all the

senses [smell] is the least certain.” By the 19th century, the sense of smell was further devalued, often dismissed as a prerogative of “lower animals” and “savages,” incapable of producing reliable knowledge. As a result, the once-common practice of *sniffing* specimens to describe their specific scents was progressively abandoned among naturalists.

Yet, despite of this shift in favour of visual-knowledge, smell perceptions undeniably remained an important part of the naturalist experience in the 19th century, as evidenced by the new genre of Nature writing. Moving away from the Cartesian constraints of traditional treatises, nature essayists of that time combined scientific inquiry and first-person narratives based on empirical experiences, appealing to a fuller, more diversified sensorium. This paper will examine the attention to the olfactory in the writings of three 19th-century North-American naturalists with a keen sense of smell: Henry David Thoreau, John Burroughs, and John Muir. Their reflections about olfactory sensitivity in human-nature relations, as well as their evocative olfactory descriptions of flora and fauna, demonstrate that active use of the sense of smell in encountering the living world is, in spite of the modern prejudice against this sense in the West, highly valuable—both scientifically, philosophically and aesthetically.

Biography:

Clara Muller is a French independent art historian and curator specializing in the intersection of art, literature, and olfaction. For nearly a decade, she has explored how odours serve as both medium and subject in artistic and literary practices. A regular collaborator to olfactory magazine and publishing house *Nez*, she is currently writing an essay titled *The Art of Smelling Nature*. Through philosophical, historical, scientific, artistic and literary considerations, she advocates for an “olfactory culture the living world.” Her study on Colette’s olfactory depiction of nature will appear in literary journal *Europe* in the fall. She also leads nature smelling workshops for all ages in the Loire valley where she lives.

Stinking Up the Land of Uz: Olfaction and Philology in Seventeenth Century Biblical Natural History.

Francis Taylor, University of York, England.

Contemporary Biblical lexicons describe *boshah*/בֹּשֶׁה, a plant that threatens to grow up in place of the wholesome crop *seorah*/שְׂעֹרָה in the Hebrew text of Job 31: 40, as a 'stinkweed'.

Acknowledgements of this pong litter Reformed translations of and commentaries on the Book of Job, as they appeared in late sixteenth and seventeenth century England and Scotland, beginning with the marginal annotation 'or noisome weeds' appended to the plant (translated as 'cockle') in the King James Bible.

Reading vernacularisations of Job 31: 40 alongside annotations, commentaries, and paraphrases of scripture by writers such as Joseph Caryl and Thomas Browne, this paper will explore the role of the sensory in early modern treatments of Biblical flora. Post-Reformation translators and scholars emphasised the importance of basing their work on the 'original' languages of scripture, rather than mediated Latin translations, triggering an encounter with the, to them, unusual botanical nomenclature of the antique Holy Land. This paper will explore how scholars used the olfactory evocations of Hebrew plant names, as revealed by their philological research, to understand their place in and importance to the scriptural landscape and its people. It will contextualise this phenomenological hermeneutic alongside interest in the role of smell in botanical classification, as well as discussions about the usefulness of Hebrew, the language with which Adam named the animals, in denoting flora and fauna in the period. As such, it hopes to emphasise the entanglement of the sensory and the theological in the production of 'natural knowledge' in early modernity.

Biography

Francis Taylor is a PhD candidate in the Department of English and Related Literature at the

University of York, and is fully funded by a Wolfson Foundation Postgraduate Scholarship in the Humanities. Francis's research, provisionally titled 'Weed-ology: Scripture, Science, and Nature in Early Modernity', explores 'weeds' as objects of theological discourse, botanical thought, and agricultural practice in England over the long seventeenth century. Francis came to their doctorate having completed a First Class BA in History at the University of Oxford, and an MA with Distinction in Renaissance and Early Modern Studies at the University of York.

Panel 5

Nose wisdom in the seventeenth-century East Indies.

Josephine Koopman, European University Institute, Florence, Italy.

Scholars working on the cultural role of odours in Western history have pointed to the ways in which, from antiquity to early modern times, the sense of smell was associated with cognition. The Latin 'sagax', root of sagacious, could mean either clever or 'keen-scented'. In the same vein, early moderns employed the term 'nose-wise' to describe someone with good judgement. To naturalists, this was not a metaphor—early modern herbals abound with olfactory knowledge. It has been demonstrated that early modern European explorers and merchants relied heavily on native informants to gather knowledge about local plants.

Building on this scholarship, this paper explores the ways in which Europeans in the service of the Dutch East India Company (VOC) valued indigenous uses of fragrance. Ever since Garcia da Orta's *Colloquies on the simples & drugs of India* (1563), the fondness of 'Indians' for fragrant flowers and perfumes became a trope. Naturalists in the seventeenth-century East Indies, such as Jacobus Bontius (1592-1631) and Georg Eberhard Rumphius (1627-1702), praise the olfactory capabilities of local informants. In their work they devote considerable attention to the ways in which native medical practitioners 'sagaciously' distinguish between various uses of plants. However, as this paper shows, applications of the aromatic qualities of plants that did not fit within the European modulation of olfaction were not recognized as knowledge but rather as superstition.

Biography

Josephine Koopman is a PhD researcher in History at the European University Institute in Florence. Her research project, 'The World in a Box', concerns the use of snuff tobacco and snuffboxes in the early modern Dutch Republic. In 2023-2024, she worked as a research fellow at the Rijksmuseum. She was involved in the EU's Horizon 2020 Odeuropa project, which sparked her interest in the history of smell.

Using sound in natural history displays – an exhibition case study.

Cam Sharp Jones, British Library

In 2023, the British Library held 'Animals: Art, Science and Sound' - an exhibition that explored how animals had been recorded throughout human history. The exhibition drew heavily from the British Library collections, including its wildlife sounds collection. Unlike previous exhibitions, sound was an integral aspect of the formation and design of the exhibition, with a key aim of enhancing the visitor experience by adopting a more multisensory approach.

In addition to the use of sound within the gallery space for all visitors, sound was also used within various tours and sessions to provide an avenue for engagement with natural history material that was previously inaccessible to blind and visually impaired visitors. This included audio described tours and multisensory sessions - pulling on material from across the collection.

Using the 'Animals: Art, Science and Sound' exhibition as a case study, this paper will explore the impact sound can have on the visitor experience as well as the value that utilizing sound can have on outreach and engagement.

Biography

Cam Sharp Jones is Visual Arts Curator at the British Library. With a background in South Asian art history and the history of science, Cam is currently responsible for the Library's collections of prints, drawings and photographs relating to Asia, British photographic archives and artworks on public display. She co-authored the British Library publication *Animals: Art, Science and Sound* that explored the historical importance of a range of zoological material from the Library's collection and was lead curator for the exhibition of the same name held in 2023 at the British Library.

Panel 6

'Tasting Andean Nature': A Spanish physician and the transmission of indigenous medical knowledge (Peru, 1621).

Mariana Ladrón de Guevara Zuzunaga, Pablo de Olavide University, Seville, Spain.

Matías de Porres (Toledo, 1583-Madrid, 1628) was the personal physician of the viceroy of Peru Francisco de Borja, Prince of Esquilache, between 1615 and 1621. He was also the author of the first book dedicated to medical matters in Peru; "Breves advertencias para beber frío con nieve", printed in Lima in 1621. This book shows the convergence of European and American medical knowledge. The aim of this research is to analyse the last part of his book, titled "Concordias medicinales de entrambos mundos", in which Porres tried, tasted and studied the medical and therapeutic properties of Andean vegetables and fruits, permanently comparing them with occidental food according to the four humours theory of Galen. Likewise, this work contributes to the analysis of consumption patterns that were taking root in Lima's creole and Spanish population.

The lack of academic work related to his life and work encouraged us to rethink and suggest a new approach to its study, including his own sensory experience and how it change his understanding of Andean medicine, which was not approved by the science community. This research allows us to offer a broader vision and provide more specific data about Matías's life and work, and highlight the importance of his sensory and taste experience in the study of Andean plants. Finally, his book shows the academic transmission of indigenous knowledge into the occidental medicine.

Biography

Mariana Ladrón de Guevara Zuzunaga is currently a History PhD student and predoctoral fellow (Spanish state scholarship) at the Pablo de Olavide University in Seville. Her historiographical interests focus on the global history of science, and political, social, and cultural relations between the Spanish Empire and the Viceroyalty of Peru. She is currently studying the agency of the personal physicians of the viceroys of Peru during the 17th century and their relations with the local medicine and its urban framework, focusing on the development of medical institutions and scientific knowledge in Lima.

Late-eighteenth sensory experiences of plants in the St Vincent Botanical Garden; examining the use of corporeal adverbs to describe plants by Alexander Anderson, and John Tyley's picturesque botanical illustrations.

Dr Christina Welch, University of Winchester, England.

Dr Alexander Anderson was a Scottish botanist who in 1785 became the superintendent of the Botanical Garden in St. Vincent. In this plant catalogue dated c.1800, he lists over 1,300 plants, many of which he described not only in botanical Latin, but also in English. In his vernacular writings about the plants growing in the Garden, Anderson's personality as an embodied human comes through. He talks about the taste and smell of plants, he describes how they looked, and felt, although he never mentions about anything connected to sound. His vernacular information is replete with adverbs meaning he wasn't just thinking of plants in terms of how they could be used, how much they produced, and where they grew best. His writings show he was an embodied human, valuing flora as much for its sensual qualities, as for how useful it was.

Anderson dried and pressed plant specimens which he sent to London, and of the few that survive which include his descriptions, again he notably uses adverbs to provide a sensory aspect to his description. But he also employed a botanical artist, John Tyley, to illustrate plant species growing in the Garden. Around 200 survive, and a good many of these are picturesque as opposed to botanically useful showing aspects of each plant in multiple seasons. As such, in this paper I examine the notion that Anderson was as much a man of the senses as a man of science, and that Tyley's work echoes this thrust.

Biography

Christina is a neurodivergent interdisciplinary researcher who lectures in the study of religions, and of death at the University of Winchester. In 2021 she led a collaborative international project under the UKRI 'Hidden Histories of Environmental Science' scheme, that unearthed the contribution of indigenous and enslaved African knowledge systems to the St Vincent Botanical Garden under Dr Anderson (1785-1811). She has been working on Anderson's archival material since 2019, and is currently fundraising to produce a guidebook for the St Vincent Botanical Garden, as despite being the oldest Botanical Garden in the Western Hemisphere, it has never had one.