Collaborating and Connecting with Natural History- Abstracts

AGM & Conference 14th & 15th May 2026 in partnership with The Ulster Museum

Thursday: 14th May

Lightning Talks: 10.40 - 11.25

Recording the social history of the RBG Kew Herbarium and tearoom. Nina Davies: Royal Botanic Gardens, Kew

In 2027, Kew's Herbarium will celebrate its 175th anniversary. Over nearly two centuries, generations of botanists have collected and identified plants, transforming our understanding of the botanical world. Thanks to a major digitisation project completed over the past five years, we now know the collection contains 6.4 million specimens, each accessible to anyone with an internet connection. This unprecedented access has opened the collection to a far broader community of researchers, communities, and interest groups, all of which have their own stories to tell.

The people working at or visiting Kew often have stories about the lives of botanical collectors, expeditions, scientific networks, and past ecologies, many of which are undocumented. In the Herbarium tearoom and corridors, botanists meet to discuss everything from their botanical research to the funny/gripping/stressful/sad stories about their working lives. These experiences are fascinating and should be recorded and shared, which inspired us to start an oral history project.

The Herbarium Curation team are stepping into social history research and recording these personal histories to document and share the stories botanists don't publish in papers. We have recruited two MA Museum Studies students to undertake interviews, who alongside the usual introduction to the Herbarium, were taught how to handle the recordings in line with General Data Protection and Regulation.

The first interviews were based on photographs provided by staff volunteering stories and agreeing to be recorded, followed by targeting a range of people across the Herbarium. With permission, stories gathered will be used as the basis for blogs, to recognise the people working with herbarium collections.

We plan to continue this project long-term and expand it to interview and gather stories from visitors as they pass through the Herbarium. Recording the human side of working with herbarium collections, sharing and archiving these as the project progresses.

Post-pickling processes: what can preservation fluid chemistry tell us about protein survival in wet collections? Tiffany Shea Slater: University College Cork

Fluid-preserved specimens are invaluable cultural and scientific resources in the archive of life – especially with current extinction rates – yet remain underutilised in molecular biodiversity research. Although recent advances have increased the potential of wet collections, specifically those preserved in formalin, to contribute to genomic research, far less attention has been paid to their value in protein-focused studies. This disparity is, in part, due to our limited understanding of post-preservation processes, namely degradation of preservation fluids such as formalin and alcohols and their interactions with preserved specimens and constituent proteins. Methanol and ethanol-based preservation, while favourable for DNA, induces protein precipitation and dehydration and the long-term consequences of which on the preservation of proteomic information are unknown.

Further complicating this issue, the identity, composition and alteration history of preservation fluids are poorly documented in many historical collections, complicating our ability to predict protein survival and make informed conservation decisions. Here we present a project framework focused on the characterisation of preservative fluids associated with specimens housed at University College Cork (UCC). Using Fourier Transform Infrared (FTIR) and Raman spectroscopy we aim to identify fixation agents, assess their relative proportions and detect proteins and lipids in solution. These data will be used to reconstruct aspects of specimen preservation history and compare degradation across fluid types.

Insights from fluid characterisation will inform on the design of controlled accelerated aging experiments to investigate post-preservation chemical processes using appropriate tissues in defined fluid compositions. Destructive analyses will be restricted to experimental tissues, generating comparative data on protein degradation pathways to guide the identification of museum specimens most suitable for future protein analyses. Ultimately, this project will support preventive curation of fluid-preserved collections and provide a framework for evaluating the viability of wet collections in future protein-based biodiversity research.

World of Wasps: a multidisciplinary research-based collaboration. Alice Holloway: UCL Grant Museum of Zoology

'World of Wasps', the world's first exhibition centred on wasps, was a multidisciplinary research-based collaboration bringing the Grant Museum together with UCL behavioural ecologists, digital designers, projection and paper artists to reveal the hidden world of wasps to challenge negative perceptions about these ecologically important animals. Alongside a physical display of wasps and nests, two virtual reality experiences were created. One based on a CT scan of a paper nest took viewers inside the nest to witness intimate social behaviours and the other showed a wasp's eye journey through a rewilded Grant Museum to experience daily wasp activities outside the nest.

Decades of research data fed into the development of all aspects of the exhibition, transforming the scientific research into a multisensory exhibition immersing visitors in the extraordinary world of wasps.

The exhibition revealed wasps as ecologically vital and socially complex animals, often misunderstood and unfairly feared. Bringing audiences closer to wasps than ever before, World of Wasps illuminated the crucial role wasps play in global biodiversity and reframed the human-wasp relationship.

By taking visitors inside the hidden lives of wasps, the exhibition ultimately aimed to inspire empathy for the natural world (invertebrates generally, wasps specifically) amidst the global decline of insect populations. A student-led research project concluded that visitors *did* feel more positively about wasps after visiting the exhibition and learning about them.

Data from recently digitised historic herbarium needs specialist cleaning before it becomes usable. David Goyder: Royal Botanic Gardens, Kew

Using as an example recently digitised plant and fungal collections from Hugo Baum's Kunene-Sambesi Expedition of 1899-1900, the first biological expedition to traverse southern Angola eastwards from the Huíla plateau, it is demonstrated that minimal data-capture by non-specialists results in data of extremely variable quality. Of the 1000 or so collections made during the Expedition, around 680 are housed at Kew. With the exception of two fungi from São Tomé, all material originated from within the territory of present-day Angola. However, around 20% of collections had been assigned to other countries. This is understandable as Angola is not mentioned on the labels, and the subheading "Reise nach Südwest Africa" led many to assume that they came from the former German colony of Southwest Africa, present-day Namibia. Geo-referencing of localities revealed further difficulties, as they were difficult to read being handwritten in German, and the published map in the original write-up of the expedition records longitudes incorrectly. Furthermore, a more recently published account of the expedition compounds the issue presenting degrees and minutes as if they were decimal degrees. In conjunction with the expedition report, river confluences were seen as reliable data points, and examination of Google Earth permitted many such localities to be accurately geolocated.

Clearly, accurate data transcription from historic expeditions where geographic data are limited, historic place names may no longer be in current use, and accurate geolocation was never recorded, can only be adequately addressed with specialist knowledge on an expedition by expedition basis.

Collaborating with Museum Studies students, to the benefit of all. Robyn Crowther: Natural History Museum, London

This talk will present a case study of a collaborative summer placement with two UCL Museum Studies MA students, undertaken as a required component of their degree. The placement was designed to provide practical, work-orientated experience while delivering meaningful outcomes for the Natural History Museum's collections. Over several weeks, the students worked on a discrete project to incorporate a newly acquired collection of UK Lepidoptera into the main collection.

The project involved completing essential collections management tasks, including assigning acquisition numbers and unique identifiers, recording specimen identifications, and documenting final storage locations. In total, 3,260 specimens were successfully integrated into the collection in just 29 working days. Although neither student's knowledge nor experience was focused on natural history collections as their course sits within UCL's School of Archaeology, their work demonstrated that effective collections management skills are highly transferable across the heritage sector.

Key to the project's success were the students' strong attention to detail, enthusiasm, and commitment to protecting and enhancing collections. They had an existing understanding of specimen/object metadata, collections organisation, and access principles, and they quickly learned the fundamentals of taxonomy and nomenclature required for Lepidoptera. These skills, rather than subject-specific expertise alone, proved critical to delivering high-quality outcomes at scale.

The collaboration was mutually beneficial: the Museum gained capacity to process a significant acquisition efficiently, while the students gained invaluable experience working with a vast national collection in a real-world professional setting. With several Museum Studies programmes across the UK, this case study encourages curators and collections managers to engage with student placements, be open-minded about prioritising transferable skills, and recognise the significant impact early-career professionals can have on collections.

The Kew carpological collection. Clare Drinkell: Royal Botanic Gardens, Kew

Sometimes parts of a plant specimen cannot be pressed effectively and preserved on herbarium sheets due to their bulky structures — primarily fruits and seeds, but also woody, spiny, and rhizomatous material. To manage this effectively as a collection the chunky parts, such as the hard-shelled fruit of the brasil nut, are often physically separated from the rest of the specimen, such as the pressed leaves and housed in individual glass topped boxes, labelled and cross-referenced to the remaining foliage which is mounted as a herbarium specimen.

This auxiliary collection at Kew is known as the carpological collection, stored in drawers and shelves throughout the herbarium – comprising -approximately 55,000 specimens, including numerous types. The collection is not only unique in terms of its size but also significant in global reach and taxonomic breadth, yet it remains largely untouched, undocumented, digitally invisible and forgotten by taxonomists mainly due to the challenges of access.

With the recent completion of the Kew mass digitisation project, 6.4 million herbarium specimens are now freely available online, allowing to generate new ideas and uses of the extended specimen concept. With this in mind, work has been underway in recent years to bring the carpological collection into the spotlight, through the work of curators, a sandwich student placement, the help of volunteers, and artists who are drawn to the aesthetic qualities of the three-dimensional structures.

Exciting projects are afoot for digitally imaging standout carpological specimens this summer and we are keen for further imaginative and creative ideas to help highlight the overlooked resources of this hidden gem. We hope the outcome will result in a wider understanding of the collections content and ultimately its digitisation for the benefit of

supporting taxonomic research, conservation, outreach, and innovative interdisciplinary collaborations.

A mammoth task: stabilising and protecting fossil mammal specimens in a sustainable and access-friendly way for a large-scale collections move. Lydia Amies & Emanuele Casafredda: Natural History Museum, London

NHM Unlocked is an ongoing programme which involves moving 28 million specimens from existing Natural History Museum (NHM) sites to a new, low-environmental-impact research and storage facility at Thames Valley Science Park. A variety of NHM collections will be moved as part of NHM Unlocked including the majority of our fossil mammal specimens. The Fossil Mammal Collection at the NHM is made up of approximately 350,000 specimens, many with complex conservation needs, from megafauna such as giant sloths to small, extinct rodent species. The Unlocked Conservation Team is tasked with ensuring the specimens are in a stable condition to move and can be handled safely throughout the process.

After a condition survey of the collection, priority levels were given to specimens based on their requirements. Many specimens needed stabilisation, either through remedial conservation treatment or by creating bespoke mounts or re-storage solutions. Accessibility, sustainability and cost have been key considerations throughout the project, as well as ensuring that storage solutions will last beyond the project and for decades into the future. The team are using creative methods to minimise waste by repurposing materials that would otherwise have been disposed of. Historic mounts are being adapted to fulfil the condition needs of specimens and improve handling, which saves time and resources. As a result of this project, the collections will be more accessible to museum colleagues and external stakeholders as specimens will be easier to handle, reducing the risk of damage. Enhanced documentation, including updated specimen photos, will allow conservation and curatorial teams to monitor specimen condition during and after relocation.

Meet the taxidermist: collaborating for innovative public engagement. Julie Griffith: National Trust - Calke Abbey & Sarah Burhouse: Birdhouse Taxidermy

Calke Abbey has the UK’s largest taxidermy collection on public display in an historic house setting. However, little active engagement with this collection has taken place during the 40 years since the property was acquired by the National Trust. Noting that visitor reactions to the taxidermy ranged from nervous curiosity to indifference and in some cases repulsion, the staff team desired to develop a more positive experience with this collection. They realised that some of the barriers to engagement with taxidermy at the property included a lack of understanding of what taxidermy is and the lack of support from us in terms of having a pathway through which to connect with the specimens. These barriers were preventing meaningful connection with the history, beauty and modern-day relevance of the objects. Keen to find creative ways to break down the mystery around taxidermy and encourage interest, we partnered with Sarah Burhouse from Birdhouse Taxidermy. Together we developed Calke’s ‘Meet the Taxidermist’ events, live demonstrations of preparing and mounting specimens held in the historic Saloon, surrounded by cases of Calke’s historic collection.

These day long events were free, drop-in sessions for visitors, who could opt in for as long as they wished. Unsure at how they would be received the Calke team are taken aback at just how successful the events have been with observational evaluation supporting this. At times visitors were seen to stay with Sarah for several hours, whilst others were observed tentatively approaching and after speaking with Sarah, actively exploring the historic collection.

We are now continuing to work with Sarah on developing other creative ways of engaging children and families as well as having Meet the Taxidermist as a regular fixture on our events calendar.

Posters

The natural science collections at UCC. Fidelma Butler: University College Cork

The natural history museum at UCC was established in the mid-nineteenth century at Queen's College, Cork. The collection is now housed at the School of Biological, Earth and Environmental Sciences, UCC. It is composed of a range of material including taxidermy animals and collections of bone material, insects – pinned and in spirit, Blaschka glass models, Victorian-era posters and magic lantern slides, previously used for teaching. Two taxidermy specimens collected by Darwin form part of a display.

At present the collections are used primarily for zoology and ecology undergraduate teaching but also some research and outreach. Other disciplines, such as artists, also use the collections (by prior appointment only). There is no public access to the museum.

Care of the collections faces several challenges, including curation of sometimes very old material. Much of the spirit collection needs 'topping-up', some of the pinned insects are very tightly packed, the glass models and the taxidermy material may need to be cleaned, and then there is the packed storage area and lack of space to display the collection.

Nevertheless, the collection now has a window on the world in the form of a website which we will use to raise its profile and subsequently apply for funding. We would like to make contacts among the members of this group to learn from your experience of dealing with these problems elsewhere.

Collaborative approaches to emergency and salvage planning for collections at the Natural History Museum, London. Lucy Watkinson: Natural History Museum, London

Many museum collections are housed within historic buildings, which present inherent constraints and unique risks for emergency response such as complex layouts or hidden voids. While more modern buildings may mitigate some structural challenges, the diverse and often fragile nature of natural history collections introduces additional risks that require careful and considered emergency planning. These factors highlight the importance of developing response strategies that focus on both conservation requirements and operational practicality.

This poster explores the value of collaborative working and knowledge exchange between the Natural History Museum and local emergency services to strengthen disaster preparedness for collections. Direct engagement with Fire and Rescue Services enables emergency and salvage plans to be aligned with operational response requirements, ensuring they are practical during an incident and supportive of both life safety and collection protection priorities. Shared training exercises are central to this approach, promoting mutual understanding of organisational roles, facilitating site familiarisation, and supporting alignment with the Joint Emergency Services Interoperability Principles (JESIP) framework.

The poster also highlights the role of knowledge sharing forums, such as the Heritage Fire Network and the Salvage Network Group, in supporting sector-wide resilience. These forums provide opportunities to exchange experience with colleagues across organisations facing similar challenges and to benefit from guidance from specialists such as London Fire Brigade.

Finally, the poster outlines future developments, including plans to expand collaborative working to include closer engagement with the Metropolitan Police, further strengthening a multi-agency approach to emergency planning for the Natural History Museum collections.

From ice to interface: 3D-scanning a woolly mammoth for preservation, movement, and public engagement. Thea Mainprize, Spyridoula Pappa, Tom Ranson & Efstratia Verveniotou: Natural History Museum, London

After more than fifty years as a mainstay in the Natural History Museum's (NHMUK) Whale Hall gallery, a skull and mandible of a woolly mammoth was removed from display in 2024. The specimen is one of the most complete mammoths in NHMUK's collection, featuring tusks and soft tissue preservation. The specimen's condition is of concern, with cracks, fractures, and erosion of the bone surface, rendering it fragile. Prior to removal from display, methods including photography were used to assess specimen condition but were unsuitable for documenting texture or depth of areas of concern. 3D digitisation methods were utilised as a non-invasive approach to capturing these areas. Initial data were collected through structured light and laser scanning, paramount in the specimen's successful removal and transportation to storage. Scans following the move were completed using an advanced structured light scanner, where previously inaccessible areas and the jaw were also captured. This approach enabled documentation of before-and-after move specimen condition where data were co-occurring. While there has been minimal soft tissue loss, further vertical cracks have been captured on the left molar. Previously existing damage does not appear to have worsened following the move, however. This 3D approach has not only served as a permanent digital record for conservators, useful for assessing condition changes in the future, but also provides a means for anyone anywhere in the world to engage with this incredible specimen without the need for physical access.

Colonial legacies: 11.40 - 12.40

Reconfiguring the natural with monsters in the Dead Zoo. Jye O'Sullivan: National College of Art and Design

This paper takes root in the conversations and research projects that have taken place between three institutions, the National College of Art and Design (NCAD), The Natural History Museum (The Dead Zoo) and the State University of Rio de Janeiro (UERJ). Paolo Viscardi (Keeper of Natural History at The Dead Zoo), Renato Pera (faculty at UERJ and founder of Políticas de Indigestão research group) and I have been discussing questions of decolonisation and object-orientated material histories for two years with the specific purpose of destabilising hegemonic narratives by examining the histories of ex-living objects and their acquisition, display and archiving.

By working between Brazil and Ireland, we have identified a range of similarities and differences in the postcolonial experience of the two territories and have attempted to develop flexible research methodologies and pedagogies that account for and generate from these differences. This paper territorialises the work, epistemological outcomes and societal impacts that these collaborations have produced by examining three case-studies. The first is the role of the Dead Zoo in the third-year Visual Cultures degree at NCAD. The second is the reconceptualization of these collaborations at UERJ and what they signify for postcolonial relations between the three institutions. The third, is the work of Glicéria Tupinambá who collaboratively wrote a book chapter with Renato and myself as part of the Marie-Curie Horizon project Space X – Rise.

Each of these case studies is critically discussed to reveal how adding nuance and complexity to postcolonial narratives can inform inter-institutional discussions, community engagement and inform the need for balance between the role of natural history museums as sites of biological education and as forces for the deconstruction of colonial epistemologies.

Fossils as Ancestors: building relationships with Indigenous communities at the Canadian Museum of Nature. Scott Rufolo: Canadian Museum of Nature

Museums around the world face many challenges as they endeavour to preserve, study, and interpret the collections in their care. Economic forces, scientific constraints, political pressures, evolving social expectations concerning the role of museums as civic institutions—these factors and more present both obstacles to and opportunities for advancing collections-based knowledge, education, and broader public engagement with heritage. In the current moment, a critical conversation is unfolding concerning the potential for cultural institutions to address the colonial legacy of which the modern museum is largely a product.

At the Canadian Museum of Nature (Ottawa, Ontario), it is only over the last decade that we have begun to systematically examine our colonial dimensions and modern intersections with the concerns of the Indigenous peoples of Canada. The vagaries of institutional history have resulted in a delayed start to developing the mindset, policies, and practices necessary to establishing concrete relationships with First Nations, Métis, and Inuit governments. As a natural history museum lacking an anthropology or archaeology division, it was once thought that we had little to concern us regarding repatriation and working closely with Indigenous communities, an illusion that has now been shattered.

In this paper, I discuss the ongoing efforts to connect the Canadian national palaeontological collection with the Indigenous peoples from whose traditional territories many of the fossils were obtained. This process is unfolding amidst a broader programme to build relationships with Indigenous organisations, resulting in a more detailed understanding of the difficulties involved in establishing meaningful and lasting collaborations. Changes to how we conceptualise natural history specimens as heritage objects, conduct curatorial practices, and develop exhibits have been essential to reorienting the museum. I will share here the details of these changes, highlighting successful partnerships and effective practices as well as the difficulties remaining to be tackled.

From Kenya to Kendal and back again: reconnecting communities through Kendal Museum's natural and social history collection. Joe Rigby: University of Chester/ Kendal Museum

This presentation draws on recent work carried out by the author in collaboration with Kendal Museum, in Cumbria, northwest England. One of the major donors to, and benefactors of, Kendal Museum in the 20th century was Colonel Edgar Garston Harrison, a big game hunter and soldier in the British colonial army. Harrison donated a large collection of hunting trophies to the museum, predominantly shot in eastern Africa at the turn of the 20th century, along with dozens of cases of taxidermy birds, preserved moths and butterflies, and a small number of cultural artefacts. Researching Harrison's military and hunting activities revealed significant connections between Harrison's collection and the dispossession of the Nandi people of western Kenya, including the assassination of the celebrated Nandi resistance leader Koitaleel Samoei. The author is now working with the museum, local council and representatives from the Nandi community to incorporate the history of Koitaleel Samoei and the Nandi resistance to British colonialism into collection interpretation and displays, and to bring communities in Cumbria and Nandi County together to collaboratively explore their connected histories. This includes the possible repatriation of three horned musical instruments currently in the museum's care, previously recorded as 'untraced finds' but now identified as likely taken from Nandi by Harrison. The presentation will use this example to try to sketch some broader lessons for thinking about how working with natural and social history collections at smaller provincial museums like Kendal could help identify opportunities for cultural restitution and social justice education, and to bring communities together that were previously connected by colonialism but might now be unaware of their shared past.

Collaborations: 14.25 - 15.45

High and dry: how we collaborate with a stranding network. Amy Geraghty & Emma Murphy: National Museum of Ireland

Marine standings provide insight into ecosystem and individual species' health. Stranding networks are made up of NGOs, academic institutions, state bodies, scientists and volunteers. Strandings rarely occur with advance notice, between Monday to Friday or within core working hours. As a result, the response to strandings is dependent on coordination, training, available facilities and clear communication. By collaborating with NGOs and actively participating in such networks, our museum benefits via donations, raised awareness of and advocation for its collections. This talk will cover the National

Museum of Ireland's involvement in a stranding network, recent case studies and a citizen science project co-run with an eNGO.

The dead plant society: a partnership project using Leeds's herbarium collection to reach new audiences. Clare Brown: Leeds Museums and Galleries

Leeds Museums and Galleries (LMG) is working in partnership with 'Space 2', an arts and social change charity based in East Leeds, to widen participation in researching and using its plant collection. Community groups from East Leeds are working with the collection to catalogue, interpret, write new stories, find old stories, recollect and talk about LMG's plants. Most participants have not been museum users, nor do they have any botanical background.

Historically, some of our barriers to engagement with the less well-off communities of Leeds have centred around a lack of appreciation of what a civic museum has to offer. The barriers also include the availability of money and transport to visit our collections and sites as well as intellectual and cultural accessibility to our collections. The Dead Plants Society project, through direct partnership with Space 2, facilitates a known, trusted and community-embedded organisation, to use LMG's collections for community engagement, enrichment and cultivating pride in a local environment. Space 2 run this project and so, by asking them to take the lead with people and communities they already know and work with, they have delivered our collections directly into the hands of groups we ordinarily find more difficult to connect with.

This talk discusses how the partnership works, co-writing a funding application and lessons learnt from the first year. It reflects on the pros and cons of the project, particularly focusing on the experience of working with a non-museum partner, and aims to share practical ideas, tools and guidance on entering partnerships like this.

The Dead Plants Society project is funded by the Esmée Fairbairn Collections Fund and Leeds City Council.

'Our Irish Natural History': increasing public engagement with natural history collections through community-driven interpretation. Adriana Ballinger: National Museum of Ireland

Scientists shape our understanding of natural history specimens, but source communities can also contribute valuable information, especially regarding the meanings that plants, animals, and geological features embody in their places of origin. Although these cultural contexts are often intangible and unquantifiable, they are nevertheless important facets of specimens' natural histories.

Our Irish Natural History is a collaborative exhibition project based at the National Museum of Ireland's Natural History Museum, or 'Dead Zoo,' which elevates Irish communities as valuable stewards of Ireland's natural heritage. Adriana Ballinger, a Postgraduate Research Fellow at the National Museum, developed this project after researching the widespread under-representation and devaluation of community-informed perspectives in the displays of natural history museums. At the Dead Zoo, the omission of this local knowledge means that visitors are not afforded a thorough understanding of Irish specimens, leaving them with limited knowledge of native

creatures' profound connections to communities throughout Ireland. Spotlighting community knowledge is especially important in the Irish context, where British colonialism suppressed the local language and culture for centuries. For more than half a year, Adriana collaborated with eight communities in the Irish Community Archive Network (iCAN) to co-curate *Our Irish Natural History*, now on display at the Dead Zoo Lab.

Adriana will share best practices for museum practitioners to follow during community collaborations, as well as community members' feedback about the *Our Irish Natural History* project and highlights from the participants' project outputs.

Collaborating with external partners to address colonial legacies and challenge the secondary school curriculum in Liverpool. Olivia Beavers: National Museums Liverpool, Sonal Mistry: freelance scientific illustrator & Aakhila Fayaz: Art Fund teaching fellow

World Museum Liverpool houses extensive historical natural science collections central to research and curatorial practice. However, much of the museum's decolonial work remains confined to journals and articles. As highlighted by an audience member at a recent Decolonisation Conference, these are not the platforms most audiences access. This raises a critical question: how can natural history museums communicate complex, uncomfortable histories meaningfully within gallery spaces?

World Museum partnered with freelance scientific illustrator Sonal Mistry to address these challenges, using scientific illustration as a practical engagement tool. The collaboration explored how scientifically accurate illustration can function as an accessible visual entry point for decolonial narratives. Sonal's focus on colonial legacies and biological accuracy has helped the museum to introduce sensitive topics often limited in public displays.

The Wild World gallery refresh marked the first inclusion of colonial legacies and decolonial interpretation within this family-orientated space. The process exposed challenges around tone, language, and visual communication, particularly when addressing contested histories alongside natural science content. Illustration offered a means to navigate these constraints by prompting curiosity and discussion without overwhelming audiences. By visually reinterpreting sensitive collections, like trophy head specimens, the museum can confront difficult histories more openly.

Building on this work, the museum received an Art Fund award, bringing Teacher Fellow Aakhila Fayaz on board to help bridge the gap between secondary education and museums. The project critically examines the science curriculum, addressing whose knowledge is represented and how colonial power has shaped scientific narratives. Outputs include CPD sessions for teachers, lesson plans, student resources, and illustrated museum graphics connecting classroom learning directly to collections.

This presentation reflects on how illustration has supported the museum in addressing difficult histories, engaging new audiences, and developing transferable tools for decolonial practices across galleries and education with confidence rather than caution.

Discussion panel

Friday, 15th May

Conservation: 10.25 - 11.05

The restoration of Caspian tigers in Azerbaijan for NGO IDEA campaign (International Dialogue for Environmental Action). Jazmine Miles-Long: Independent taxidermist & Bethany Palumbo: Palumbo Conservation

In early 2026 Jazmine Miles-Long an independent museum taxidermist and Bethany Palumbo ICON-accredited conservator travelled to Azerbaijan to restore two Turan (or Caspian) taxidermy tigers, a now-extinct subspecies. The tigers were created in 1937, and after the collapse of the Soviet Union the tigers were placed in a university next to a window, where they were exposed to direct sunlight for many decades. As a result, the fur faded, and parts like the tails, ears, claws, whiskers and some of the hide were lost. In 2025 the tigers were restored by a well-meaning local taxidermist whose work was unfortunately not to a museum standard or sympathetic to the historic and scientific significance of the specimens. Jazmine and Bethany will show the techniques used for this restoration effort. This includes foremost the delicate removal of the previous restoration, this was especially complex due to the unknown nature of the materials used. New treatments were then undertaken including the removal and replacement of the eyes, reconstruction of soft tissue sections such as the ears, eyelines and tail. The specimens were also recoloured, using conservation-quality techniques which would be fully reversible if required. The work was organised by NGO IDEA Campaign Azerbaijan / International Dialogue for Environmental Action. We will discuss what it was like working as independent museum professionals with an international NGO, in a country where museum conservation ethics are still developing. What was tricky, what was successful and what we learned.

“Hide” and seek: display context and remediation of unrecorded historic interventions in taxidermy rhinos at the Natural History Museum. Lauren Burleson, Claire Kelly, Efstratia Ververiotou & Erica Read: Natural History Museum, London

The Natural History Museum in London has a significant collection of large mounted taxidermy mammals, many on permanent display. This presentation will focus on the treatment of four rhino specimens from Mammal Hall and their recent treatments across varying display contexts. These specimens were all acquired at least 100 years ago and have been on permanent open display in the museum for decades.

Over the last four years, these specimens have been utilised for other exhibitions, including permanent and temporary displays. Each iteration and display adaptation has required bespoke treatment decision making and collaboration by the conservation team within exhibition constraints. In-gallery conservation treatments have provided the opportunity for outreach, both digitally and directly to museum visitors.

Various issues arise with historic taxidermy on long-term, open display, including cyclical poor environmental conditions and previous damage. One of the major issues encountered with these specimens is the presence of previous, unrecorded display-specific and restoration interventions, such as heavy historic overpainting and aesthetically unincorporated failing historic fills. As part of conservation works,

experimentation and development of various methods of fills and skin replication will be discussed and compared, as well as the removal, reversal, and retreatment of unrecorded historic interventions dependent on display context.

Education and Outreach: 11.25 - 12.25

There are no silly questions – engaging and inspiring with natural science collections. Nigel Gilmore-Cook: National Museums Northern Ireland

Which would win in a fight, a shark or a gorilla? Were dragons real? Why are grey squirrels the evil ones?

All genuine questions Education Officer Nigel Gilmore-Cook has been asked over the course of 8 years in museum education. Not one of these questions was dismissed or avoided – each one was appreciated, considered and answered in a way that incorporated real science.

Nothing causes people to disengage with a subject faster than being made to feel silly for not knowing something or for being curious. This is why when it comes to engaging museum visitors of any age with natural science collections, being open-minded and at times recognising the pre-conceived ideas someone brings with them is essential.

This is particularly important at a time in which misinformation spreads quickly, and many people seek learning not from peer-reviewed or educational sources, but from social media and online personalities. Counteracting this requires a multifaceted approach, and one that does not demean or patronise.

Similarly, in the face of growing eco-anxiety, how do we establish ourselves as a trusted voice on the topics of rapid climate change, pollution and habitat destruction, whilst leaving young people feeling empowered and hopeful for the future?

Over the course of this talk, Nigel will share real-world scenarios of the fun, weird, and sometimes challenging field of museum education and how he combines real natural sciences objects with skills development, creative activities and pop-culture references to engage and inspire a range of audiences.

Early curators: building connections, confidence and care through cross-team collaboration and co-creation. Lucy Maycock & Jo Hatton: Horniman Museum and Gardens

Early Curators was a multi-partner co-creation project delivered by the Horniman's Formal Learning, Natural Science and Collections teams, working with three mainstream primary schools with high levels of pupils receiving a Pupil Premium Grant, one specialist secondary school, and a group of home educating families. Developed as part of the Horniman's major NLHF-supported *Nature + Love* project, it aimed to open access to our collections and expertise, building love, connection and care for the natural world amongst young learners, instilling greater confidence, agency and voice and exploring how museums can work differently and creatively with young learners in a fast changing world, to deliver real world outputs in a new gallery space.

During the project, a series of workshops were delivered onsite, in-school, and at the Museum's Study Collections Centre. Museum staff from across teams supported

learners to get up close to specimens, develop research and creative skills and gain first hand insight into different kinds of museum work from conservation and collections care, to documentation, photography exhibition and interpretation development and curation. The project culminated in artist-led sessions producing creative responses to chosen specimens that will sit alongside them in the new gallery. Outdoors, in classrooms and in stores, learners explored how natural science collections can help everyone connect with the natural world and better understand and find solutions to the global challenges we face today.

Here, we share the learnings from this project and offer practical methods that others can use to develop cross-team collaboration, build meaningful partnerships and collaboration, and spark enthusiasm for museums and collections alongside care and appreciation for the natural world.

Grass-roots: enterprising students collaborate to develop sustainable herbarium merchandise. Kelly Hemmings & Katherine Duke: Royal Agricultural University

Applications of herbaria in outreach, teaching, history, and the arts have been well-recognised. Indeed, engagement with natural history collections has never been easier due to technological advances in mass digitisation, online search tools and chatbots. However, little attention has been paid to the role of such collections in entrepreneurship and enterprise education.

Using a social enterprise approach, we devised a collaborative staff-student project to develop sustainable herbarium-themed merchandise. The project was a novel joining of the recent digitisation of the Royal Agricultural University's historic herbarium and its existing enterprise programme. We aimed to create excitement and curiosity around the herbarium both within the institution and among the wider public. A secondary motivation was to self-generate funds for conservation, research and access to the collection.

We established a series of extra-curricular enterprise workshops, open to students, visitors, and staff of the University, in addition to curriculum-based activities. Participants identified greetings cards and tote bags as feasible initial products and selected focal herbarium specimens as the basis of designs. Market research revealed strong preferences for locally-collected specimens, striking or unusual species, such as ferns and algae, and inclusion of authentic herbarium metadata in antiquated handwriting. Sustainably-sourced materials were deemed crucial, as were ethical sales outlets.

A core group of student participants collaborated with academic and enterprise staff throughout the design, marketing and sales processes over the course of a year. They reported gaining enterprise skills such as costing and pricing the products by working with an established greetings card entrepreneur. Participants also enjoyed the artistic elements, working with people during market research, and felt more invested in the University's work with natural history collections. The collaborative grass-roots nature of the project has provided a strong start to an original and expanding enterprise.

Digitization and AI: 13.10 - 14.50

Storytelling through science: how collaborative doctoral research enriches natural history collections. Cait McDaniel: Queen Mary University of London & National Museums Northern Ireland

The UKRI AHRC-funded Collaborative Doctoral Partnership (CDP) supports doctoral researchers working across universities and natural history collections, fostering interdisciplinary research and strengthening connections between collections-based practice and humanities scholarship.

As a CDP student working collaboratively between National Museums Northern Ireland (NMNI) and Queen Mary University of London (QMUL), I explore how these interdisciplinary partnerships can expand how natural history collections are interpreted and understood by researchers, museum professionals, and wider audiences.

My project, *John Templeton (1766–1825) and the Emergence of Irish Botany*, explores a set of five unpublished manuscripts by John Templeton collectively titled the *Hibernian Flora*. Templeton was a formative naturalist and a foundational figure of Enlightenment-era Belfast. He navigated the complex political, scientific, and cultural intersections of late eighteenth- and early nineteenth-century Belfast, documenting his perspectives extensively through journals, correspondence, and manuscript material.

This project involves the digitisation and analysis of Templeton's manuscripts, combining approaches from archival history, textual scholarship, digital humanities, museum studies, and taxonomic botany. Exploring how connecting historical and contextual material with natural history collections supports new approaches to understanding the evolution of scientific knowledge. By focusing on practical methods and lessons learned through collaborative research, digitisation, automated transcription, and interpretation of natural science manuscripts, I examine the obstacles commonly encountered when working with historic handwritten scientific material and highlight the benefits of interdisciplinary research.

Talk to the animals: using AI to allow visitors to converse with museum objects. Jack Ashby: University Museum of Zoology, Cambridge

What's the potential for AI as a tool for meaningful museum interpretation? What happens when visitors can ask objects any questions they like, and the objects can answer back?

In what is believed to be the first use of AI to allow visitors to have conversations with museum objects from the objects' point of view, the University Museum of Zoology in Cambridge partnered with Nature Perspectives to run an experiment to test whether chatting to natural history specimens can deepen visitors' engagement with nature and enhance learning opportunities. Does giving animals a voice foster greater curiosity, understanding and care for the natural world? This is an unusual example of a natural history museum and a tech company having very similar underlying strategic aims.

This talk will share how we approached the project and present early insights that could inform how museums of all disciplines could make use of AI in their displays, including a discussion about whether such interventions are necessarily appropriate across different museum settings.

For the curious and interested: collaborations to unlock the botanical collections of Sir Hans Sloane. Mark Carine: Natural History Museum, London

The botanical collections assembled by Hans Sloane (1660–1753) form the foundation of the Natural History Museum's herbarium. Gathered from the 1680s until Sloane's death, they encompass approximately 120,000 pressed plant specimens preserved in 265 bound volumes, along with nearly 9,000 surviving "Vegetables and Vegetable Substances" housed largely in their original decorative wooden and glass boxes. Together, these collections represent material from more than 70 countries and territories worldwide and include contributions from over 500 named collectors. As Vicky Funk noted in her 2003 *ASPT Newsletter* article listing "100 Uses for a Herbarium (well at least 72)," herbaria support an extraordinary diversity of research. Sloane's collections exemplify this breadth, underpinning work ranging from taxonomy and environmental change to the history of collecting practices and the entangled relationships between natural history, colonialism and enslavement. This talk explores how collaborations with historians and digital humanities scholars have enabled new ways to access Sloane's herbarium and Vegetable Substances, digitally "unlocking" those collections and allowing researchers to interrogate them in new ways. The challenges and compromises inherent in this process are discussed and the new insights gained into Sloane's collecting and cataloguing processes reviewed. Finally, new research avenues enabled by this work are highlighted - from genomic studies of extinction and domestication to investigations into shifting plant knowledge systems in southern India and the use of plant-based abortifacients by enslaved women as acts of resistance.

AI for environmental resilient planting: from herbarium to home garden. Carol Barrie & Yvette Harvey: The Royal Horticultural Society

The Royal Horticultural Society (RHS) is strengthening its commitment to helping the nation's gardeners enhance environmental resilience through a new AI-driven "right plant, right place, right purpose" tool. This work is underpinned by the sheer scale of gardening in the UK: recent national mapping has identified 25.8 million gardens across Great Britain, making them one of the country's largest collective green assets. A substantial proportion of these lie in urban areas, where environmental interventions are particularly impactful; residential gardens in urban Britain cover approximately 521,872 hectares, around 29.5% of total urban land area. [rhs.org.uk] [flexiborder.co.uk]

In partnership with researchers at the University of Nottingham, the RHS is harnessing machine learning models trained on digitised herbarium specimens from the RHS's specialist herbarium of ornamental plants. These models detect morphological traits that correlate with key ecosystem service functions, including improved water retention, flood mitigation, enhanced pollination, and pollution reduction air cooling, pollution capture and carbon storage. By combining these AI-derived insights with horticultural expertise, the project is identifying cultivars capable of delivering measurable environmental benefits under a range of site conditions.

Crucially, the results and plant recommendations generated through this research will be made freely available via the RHS website, ensuring that gardeners - from balcony growers to landscape professionals - can access evidence-based guidance to support climate positive planting decisions for our planet, our wildlife and our human population.

Creating a digital collection of snail hosts for *Schistosoma* parasites for science and education. Adam Cieplinski: Natural History Museum, London

Schistosomiasis, a parasitic infection caused by *Schistosoma* species and transmitted via freshwater snails, remains a major neglected tropical disease, predominantly affecting sub-Saharan Africa. Schistosomiasis control programmes often include mapping water bodies and their snail populations in endemic areas. These efforts depend on the accurate identification of snail host species, a task that often relies on field assistants who lack formal malacological training. Such taxonomic training opportunities are scarce due to the lack of easily accessible resources and a general underrepresentation of snail-focused research.

The Natural History Museum in London houses one of the world's largest gastropod shell collections, including type specimens and species known to act as intermediate hosts for *Schistosoma* species.

We digitised part of the museum's African snail collection, with a focus on species involved in human schistosomiasis. Shells were photographed and scanned using micro-computed tomography to produce high-resolution 3D mesh models, which were further optimised for 3D printing. All 3D models and photographs were deposited in the Sketchfab repository, where they are freely available for download. We also demonstrate a workflow for producing large-scale, painted 3D-printed replicas, which serve as highly accurate representations of the original shells. In addition, we produced short 3D animations illustrating how these models can be used as interactive tools for teaching shell morphology.

This project aims to support malacological training, disseminate knowledge, and enable more accurate snail surveillance in schistosomiasis-endemic countries. This unique digital catalogue, drawing on expertise from specialists across multiple disciplines, represents the first curated 3D resource of schistosomiasis vector snails. It also constitutes an initial step toward building a comprehensive future snail species database. Moreover, the methodology developed here can be applied to other museum collections, enabling the digital preservation of scientifically important and fragile specimens for education, research, and public outreach.