

SPNHC 2022 PROGRAMME *(as at 19.05.22, subject to change)*

Saturday 4th June 2022

14:00 – 18:00	Registration Open	Royal Botanic Garden Edinburgh, John Hope Gateway, Arboretum Pl, EH3 5NY

Sunday 5th June 2022

PLEASE NOTE ALL FIELDTRIPS MUST BE PRE-BOOKED

10:00 – 18:00	Registration Open	Royal Botanic Garden Edinburgh, John Hope Gateway, Arboretum Pl, EH3 5NY
08:45 – 17:30	Outlander Tour	**Meeting points and timings will be communicated to individuals booked on each fieldtrip.**
09:30 – 11:30	Edinburgh Walking Tour – Edinburgh Rocks	
10:00 – 12:00	Edinburgh Walking Tour – Plants & Habitats of Arthurs Seat	
13:00 – 16:00	Maid of the Forth & Inchcolm Island	
14:00 – 16:00	Edinburgh Walking Tour – Greyfriars Kirk & Pavement Palaeontology	
14:00 – 16:00	Distillery Tour	
19:00 – 20:15	Mercat Ghost Tour	

Monday 6th June 2022

07:30 – 18:30	Registration Open	McEwan Hall
10:30 – 17:30	Exhibition Open	McEwan Hall
08:30 – 09:30	**SPNHC Standing Committee Meetings**	
	Education	Deans Room, McEwan Hall
	Best Practices	Lecture 1, Appleton Tower
	Long Range Planning	Lecture 2, Appleton Tower
	Web	Lecture 3, Appleton Tower
08:30 – 10:30	**BHL Annual Meeting Reports**	Lecture 5, Appleton Tower
09:30 – 10:30	**SPNHC Standing Committee Meetings**	
	Emerging Professionals	Deans Room, McEwan Hall
	Legs & Regs	Lecture 1, Appleton Tower
	Conference	Lecture 2, Appleton Tower
	Archives	Lecture 3, Appleton Tower
10:30 – 11:00	Refreshment Break	McEwan Hall
11:00 – 12:00	**SPNHC Standing Committee Meetings**	
	International Relations	Deans Room, McEwan Hall
	IDEA	Lecture 1, Appleton Tower
	Grants & Recognitions	Lecture 2, Appleton Tower
	Colln Theft & Security	Lecture 3, Appleton Tower
11:00 – 13:00	**BHL Annual Meeting Reports contd.**	
12:00 – 13:00	**SPNHC Standing Committee Meetings**	

*Pre-Recorded Presentation

	US Federal Collections	
	Biodiversity	Lecture 1, Appleton Tower
	Conservation	Lecture 2, Appleton Tower
	Membership	Lecture 3, Appleton Tower
13:00 – 14:30	Lunch & Exhibition	McEwan Hall
13:00 – 14:30	Emerging Professionals Luncheon	Foyers 1-4
13:00 – 14:30	Committee Chairs Meeting	Lecture 1, Appleton Tower
14:30 – 16:00	**Opening Ceremony** **Chair:**	Lecture 4, Appleton Tower
14:30 – 14:45	Welcome *Angus Robertson MP*	
14:45 – 15:30	Climate Change & Collections *Mark Maslin*	
15:30 – 16:00	Discovering the Deep: Edinburgh and the birth of deep-sea science *Hermione Cockburn*	
16:00 – 16:30	Refreshment Break	McEwan Hall
16:30 – 17:00	Scottish Folk Flora *Greg Kenicer*	Lecture 4, Appleton Tower
17:00 – 17:30	#UNITEDFORBIODIVERSITY Gilles Doignan	
17:30 – 18:00	Publications Committee Meeting	Lecture 2, Appleton Tower
19:00 – 21:00	SPNHC 2022 Welcome Reception	Royal Botanic Garden Edinburgh

Tuesday 7th June 2022

08:00 – 18:00		Registration Open	McEwan Hall
09:00 – 17:00		Exhibition Open	McEwan Hall
09:30 – 11:00		**Concurrent Sessions - 1**	
09:30	09:45	(**MI) MIDS - A digitisation standard for natural history collections** **Co-Chairs: Elspeth Haston and Heimo Rainer** The first stage digitisation standard: What are MIDS-1 and MIDS-1i and how do you use them? *Elspeth Haston*	Lecture 1, Appleton Tower
09:45	10:00	A schema to calculate MIDS scores *Mathias Dillen*	
10:00	10:15	How well is the world's biodiversity represented in collections? *Pieter Huybrechts*	
10:15	10:30	Applying the Digital Extended Specimen: building collections and integrating data *Sara Hansen*	
10:30	10:45	**G1: General** Setting Natural Science Data Free: UK Collections' Digital Readiness *Tara Wainwright*	
10:45	11:00	Harnessing the Goldilocks Effect: What is the best way to share digitisation workflows? *Lisa French*	
09:30	09:45	**G3: General** **Chair: Isla Gladstone** New digitization technologies at the service of science and society – do virtual nature museums have a future? *Marcin J. Kamiński* *	Lecture 2, Appleton Tower
09:45	10:00	Digi-Leap: Connecting Novel Tools, Machine Learning and Public Participation to Label Digitization Efforts	

*Pre-Recorded Presentation

		Rob Guralnick *	
10:00	10:15	DINA and ODK – Useful tools for digitisation and moving of natural history collections *Majid Vafadar*	
10:15	10:30	What's the use? Physical and digital use of the Naturalis collection *Max Caspers*	
10:30	10:45	Digitized Collections as a Means to Deepen Informal Science Learning: An Argument and Early Findings *Lynne Zummo and Madlyn Larson*	
10:45	11:00	Setting quality thresholds for the use of natural history collection specimens in scientific studies *Annmarie Fearing*	
09:30	09:45	**G4: General** **Chair: Mariana Di Giacomo** Alcide d'Orbigny and the Paris Foraminifera: story of a collection under Byne attack *Clara Hairie*	Lecture 3, Appleton Tower
09:45	10:00	Pathologies associated with the Osteological Collection of the Natural History and Science Museum of the University of Porto *Sofia Perestrelo*	
10:00	10:15	The Durfort Mammoth at the Muséum National d'Histoire Naturelle, Paris : a Specimen that accounts for 150 Years of Restoration Practices *Veronique Rouchon*	
10:15	10:30	Herbarium as an object for conservation. Ethical background to decision making on conservation treatments *Magdalena Grenda-Kurmanow* *	
10:30	10:45	Documenting the alteration of Georges Deflandre's microscope slides: a way to assess the most durable mounting method? *Alice Gimat*	
10:45	11:00	The role of the conservator in construction projects: the Yale Peabody Museum renovation as a case study *Mariana Di Giacomo*	
09:30	09:45	**(LI) Liberating Natural History Collections Data in Biodiversity Literature** **Chair: Connie Rinaldo and Martin Kalfatovic** Nothing in (taxonomic) publishing makes sense except in the light of treatments *Donat Agosti*	Lecture 4, Appleton Tower
09:45	10:00	All the cool stuff a taxonomic journal can (should?) showcase through semantic enhancement *Laurence Benichou*	
10:00	10:15	Collection and specimen data life cycle completed: The case of Pensoft's journals and OpenBiodiv Knowledge Graph *Lyubomir Penev* *	
10:15	10:30	A new romance between taxonomic literature and specimen data? News from Paris *Gildas Illien*	
10:30	10:45	Using specimen citations to show the impact of natural history collections: metrics, machine learning, and manual annotation *Andrea Thomer* *	
10:45	11:00	Presenting botanical type citation data from the International Plant Names Index as material citations *Nicky Nicolson* *	
09:30	09:35	**(LT1) Long time no see** **Chair: Jennifer Gallichan** Introduction to the Symposium *Jennifer Gallichan*	Lecture 5, Appleton Tower

*Pre-Recorded Presentation

09:35	09:44	The Natural History Museum of Denmark: a new museum, new exhibitions and new collaborations *Bethany Palumbo*	
09:44	09:53	Introducing the "IUGS Geocollection Subcommission" – the new international body to represent geological collections *Rachel Walcott*	
09:53	10:02	It takes a village to fill a herbarium: how a small team can accomplish big things *Clare Booth-Downs*	
10:02	10:11	Breathing New Life into Collections *Klara Scharnagl**	
10:11	10:20	An Agate a Day Gets the Public Engaged *Emily Brown*	
10:20	10:29	Keeping the doors open (Virtually) – Natural Science events during lockdown. Changing the way we deliver public outreach events at Amgueddfa Cymru National Museum Wales *Andrew Haycock*	
10:29	10:38	Updates on the Natural History Collections Club Network (NHCCN) *Kevin Krajcir*	
10:38	10:47	Connect-Conserve Cyswllt-Cadwreath Cymru - a new way of working together as conservators in Wales *Kate Andrew*	
10:47	10:56	Remote Volunteering: Publication Round-up *Nicole Volden*	
10:56	11:00	End of Session 1 Wrap Up Jennifer Gallichan	
11:00 – 11:30		Refreshment Break	McEwan Hall
11:30 – 13:00		**Concurrent Sessions - 2**	
		G2: General **Chair: Erica Krimmel**	Lecture 1, Appleton Tower
11:30	11:45	Measuring the economic impacts of digitised collections *Helen Hardy*	
11:45	12:00	Marine Biological Collections: their importance and value *Elena Guerrero*	
12:00	12:15	Perspectives and challenges of creating a new museum in 21st century Brazil *Bruna Toscano*	
12:15	12:30	The Chiapas Maya Project - an Update *Lori Benson*	
12:30	12:45	Preserving and Sharing Museums and Collections Through Exhibit Hall and Collections Area Virtual Tours and 3D Specimen Photogrammetry *Ralph Kugler*	
12:45	13:00	Rediscovering the rocks of Surinam: giving structure and context to a collection with the aim of decolonization *Frances Versluis*	
		(MO1) Mobilizing specimens for factbased conservation in the face of a global biodiversity crisis **Chair: Jutta Buschbom**	Lecture 2, Appleton Tower
11:30	11:45	Use of New York Botanical Garden Digitized Herbarium Specimen Data for Biodiversity Conservation *Barbara Thiers*	
11:45	12:00	A Museum of Biology in the capital of Brazil *Gabriela Hirata*	
12:00	12:15	Collection Discovery and Development at the Museum für Naturkunde Berlin *Jana Hoffmann*	

*Pre-Recorded Presentation

12:15	12:30	Using collections data to solve the mystery of the Black-winged Monarch or "To lose a species is tragic; to not know where it is for half of every year when nearly 200 museum specimens exist is careless." *Leo Joseph* *	
11:30	11:42	**(AU) Authentic natural history museum experiences to prepare students for global challenges** **Chair: Jack Ashby and Adania Flemming** Museums, Students, Zoology and the Public: Bringing Them All Together *Jack Ashby*	Lecture 3, Appleton Tower
11:42	11:54	Lessons learned from fifteen years of "The Collections Course" at the University of Connecticut *Sarah Taylor*	
11:54	12:06	Tucson Bee Collaborative: engaging 2-year and 4-year college students in specimen-based research *Wendy Moore*	
12:06	12:18	Natural History Collections Research Design: A discussion course for research applications using collections and differentiating hypotheses from predictions *Travis Marsico* *	
12:18	12:30	Watching History Repeat Itself: How undergraduate involvement in collections has changed (or not) over the past 200 years at a small liberal arts college *Lyndell Bade*	
12:30	12:42	Assessing marginalized undergraduate students use of Natural History Collections *Adania Flemming* *	
12:42	13:00	Discussion *Jack Ashby and Adania Flemming*	
11:30	11:50	**(RE) Reflections on the Biodiversity Heritage Library: Value in Collections and Collaboration** **Chair: David Iggulden** The Biodiversity Heritage Library as a platform for connecting natural history materials *Diane Rielinger & Joseph deVeer* * (Diane in person, Joseph pre-recorded)	Lecture 4, Appleton Tower
11:50	12:10	Better publications for better research *Elisa Hermann*	
12:10	12:30	Project #RetroPIDs: BHL's mission to unlock the world's biodiversity literature *Nicole Kearney*	
12:30	12:50	Discussion	
11:30	11:35	**(LT2) Long time no see** **Chair: Yvette Harvey** Welcome to Session 2 *Yvette Harvey*	Lecture 5, Appleton Tower
11:35	11:44	Conservation and photogrammetry of subfossil Quaternary walrus (Odobenus rosmarus) from the Bay of Fundy, Canada *Dee Stubbs-Lee* *	
11:44	11:53	Digitisation of the National Herbarium of Ireland (DBN) *Wuu Kuang Soh*	
11:53	12:02	Crystal Model Collections in UK Museums *Peter Davidson*	
12:02	12:11	New focus and new audiences for the engagement programme at the Museum of Zoology during the pandemic and into the future *Rosalyn Wade*	

*Pre-Recorded Presentation

12:11	12:20	The ZooMu Initiative: Enhancing the Value of Zoo Collections to Advancing Biological Sciences by Bridging the Gap Between Zoos and Museum *Gregory Watkins-Colwell*	
12:20	12:29	Making Nature: Preventive Conservation and Sustainability Challenges in Contemporary Diorama Construction *Claire Dean*	
12:29	12:38	Curatorial handover in the time of Covid *Mike Rutherford*	
12:38	12:47	Exploring and Evolving: Bringing over a million specimens out of the shadows at the Cambridge University Herbarium *Lauren Gardiner*	
12:47	13:00	Questions and end of Session 2 wrap up *Yvette Harvey*	
13:00 – 14:00		Lunch & Exhibition	McEwan Hall
14:00 – 15:30		**Concurrent Sessions - 3**	
		(ID1) Identifiers and labels in natural history collections: new technologies, challenges and opportunities for linking objects and data **Chair: Christian Bölling**	Lecture 1, Appleton Tower
14:00	14:15	Why not use RFID's in natural history collections? *Luc Willemse*	
14:15	14:30	Identifiers and labels for everyone: recent developments in Symbiota *Laura Rocha Prado **	
14:30	14:45	Specimen Data Refinery - A novel approach to automating digitisation *Julie Gray*	
14:45	15:00	Partnering with scholars in the digital humanities to link an historic regional herbarium with its original collection and accession records *Andrea Weeks*	
15:00	15:15	Networking specimen data across collections and disciplines: the CETAF Botany Pilot *Anton Güntsch **	
15:15	15:30	Assisting digitisation and specimen data enhancement through Digital Specimen Identifier DOI infrastructure and services *Wouter Addink*	
		(MO2) Mobilizing specimens for factbased conservation in the face of a global biodiversity crisis **Chair: Jutta Buschbom**	Lecture 2, Appleton Tower
14:00	14:15	Contribution of undergraduate botanical research on plant species' conservation in a biodiversity hot-spot *Alina Freire-Fierro **	
14:15	14:30	How museum specimens and community science data are used to revise the conservation status of a rattlesnake in Utah, USA *Drew Dittmer **	
14:30	14:45	Citizen Science Initiatives as Sources of Fungal Biodiversity Data *Gregory Mueller **	
14:45	15:00	The Ulster Museum Natural Sciences collections – past, present and future, here for good *Helen Barber-James*	
15:00	15:15	Marine biodiversity advances using the natural collections and open data *Hanieh Saeedi **	
15:15	15:30	Multiplying the value of collections data through sharing and citation *Tim Hirsch*	
		(CE) Civically engaged natural history museums: transforming public programmes to address societal challenges **Chair: Jack Ashby**	Lecture 3, Appleton Tower
14:00	14:15		

*Pre-Recorded Presentation

		Introducing the 'civically engaged natural history museums: transforming public programmes to address *Liz Hide*	
14:15	14:30	Museums, Health and Wellbeing *Miranda Stearn*	
14:30	14:45	Reveal, Reclaim and Recognise: Digging under the hidden narratives of natural history collections *Miranda Lowe*	
14:45	15:00	Natural history collections and social impact in the context of the climate and ecological crises *Isla Gladstone*	
15:00	15:30	What next? Taking action to enable natural science collections to be socially engaged: an open discussion *Liz Hide*	
14:00	14:15	**(ML1) Managing Long-Term Sustainability in an Uncertain Future** **Chair: John Simmons** Managing Long-Term Sustainability in an Uncertain Future *John Simmons*	Lecture 4, Appleton Tower
14:15	14:30	Testing An Alternative Shelving Arrangement to Optimize Space and Task Efficiency in a Fluid Fish Collection *Dean Hendrickson **	
14:30	14:45	A new approach to mammal specimen storage at LACM *Shannen Robson*	
14:45	15:00	Prepare to move – even if you don't *Paul Callomon*	
15:00	15:15	Questions *John Simmons*	
15:15	15:30	Redesigning databases for comprehensive collection management *Christine Johnson*	
14:00	14:15	**G5: General** **Chair: Jessica Nakano** A New Era of Provenance Research? How the Yale Peabody Museum is looking at provenance today *Erin Gredell*	Lecture 5, Appleton Tower
14:15	14:30	A proposal for the entomological collection workflow to study diversity applied to forensics and conservation: from the field to data publishing. *Luz Miryam Gomez Pinerez*	
14:30	14:45	Setting prioritites for managing previousely unmanaged collections *Hans Kristensen*	
14:45	15:00	The Trèmols herbarium (19th century), a European herbarium preserved at the Botanical Institute of Barcelona *Laura Gavioli **	
15:00	15:15	Stay on top of permits, MATs and MTAs – collating sample and legal information with existing data management systems in compliance with legal requirements. The GDM at MfN – a case study *Peter Giere*	
15:15	15:30	Recovering an abandoned Zoological Museum – the case of the Natural History and Science Museum of the University of Porto, Portugal *Luis Ceriaco*	
15:30 – 16:00		Refreshment Break	McEwan Hall
16:00 – 17:30		**Concurrent Sessions - 4**	
16:00	16:15	**(ID2) Identifiers and labels in natural history collections: new technologies, challenges and opportunities for linking objects and data** **Chair: Christian Bölling** Persistent identifiers for specimens/samples are way more than yet another label	Lecture 1, Appleton Tower

*Pre-Recorded Presentation



		*Lesley Wyborn **	
16:15	16:30	Institution Codes, Collection Codes, and Specimen Identifiers: linking voucher specimen to Tissues, DNA Samples, and Sequence Data *Daniel Mulcahy*	
16:30	16:45	Integrating Zoo and Museum Collections Databases: A Case Study *Serina Brady **	
16:45	17:00	Darwin Tree of Life Project: Sample Tracking *Heather Allen*	
16:00	16:15	**(MO3) Mobilizing specimens for fact-based conservation in the face of a global biodiversity crisis** **Chair: Jutta Buschbom** The value of herbarium specimen collections for quantifying the impact of the 2019-2020 bushfire and drought disasters on Australian plant biodiversity *Robert Godfree **	Lecture 2, Appleton Tower
16:15	16:30	Spatial uncertainty in data from Natural History Collections as mediated by GBIF. Implications for ecological research *Arnald Marcer*	
16:30	16:45	Misidentifications of herbarium specimens are a great problem for distribution studies: Kalanchoe as a case study *Jordi López-Pujol **	
16:45	17:00	Making the most out of your collection data to assess the extinction risk of endemic plant species *Wesley Tack*	
17:00	17:15	Specimen-based model clade research and its implications for biodiversity conservation *Patrick Sweeney*	
16:00	16:10	**(EX) Exhibiting Extinction and Endangerment** **Chair: Dolly Jørgensen** Introduction to the symposium *Dolly Jørgensen*	Lecture 3, Appleton Tower
16:10	16:30	Facing Extinction: Gorilla Death Masks in Museum Conservation Narratives *Verity Burke*	
16:30	16:50	From Extinction Voices to Extinction Silences: exploring how natural history displays can shape narratives and action against future extinctions, using a case study from Bristol Museums *Isla Gladstone*	
16:50	17:10	As Dead as a Dodo: Extinction Narratives and Justice in the Museum *Anna Guasco*	
17:10	17:30	Running Out of Time: Extinction, Impermanence and Museum Display *Alice Would*	
16:00	16:15	**(ML2) Managing Long-Term Sustainability in an Uncertain Future** **Chair: John Simmons** Publication vs. Collection Management: What was your CMS designed for? *Teresa Mayfield-Meyer*	Lecture 4, Appleton Tower
16:15	16:30	Specimens, tissues, DNA samples and permits: how databases can support comprehensive collection management Dirk Neumann	
16:30	16:45	Creating Active Collections in Natural History Museums *Laura Alejandra Rincón Rodriguez*	
16:45	17:00	Being strategic: reassessing the use and interpretation of collections *Julianne Snider*	
17:00	17:15	Approaching sustainability through strategic reduction of concerns *Robert Waller*	
17:15	17:30	Questions and closing remarks	

*Pre-Recorded Presentation

16:00	16:05	**(SS) Specimen spotlight** **Chair: Paul Mayer** Nummulites: The Largest Single-Celled Organism, World Fair Collection, Building Blocks of the Pyramids, and the "Nummulosphere" *Paul Mayer*	Lecture 5, Appleton Tower
16:05	16:10	Gryposaurus monumentensis: the holotype fossil that brings people together *Bailey Jorgensen*	
16:10	16:15	How a green tooth and a global pandemic inspired change *Danielle Serratos*	
16:15	16:20	The historically important lectotype of Stenopterygius eos and its conservation and restoration over 166 years *Cristina Gascó-Martín*	
16:20	16:25	The meteorite of Barcelona (1704) in the Salvador collection: History and discovery *Neus Ibáñez* *	
16:25	16:30	Where Did You Find That!? *Amy Covell-Murthy*	
16:30	16:35	Florence Nightingale's shells. Finding historical treasure among the collection of mollusc specimens in the University of Nottingham's Zoology Collection *Beth Scahill*	
16:35	16:40	The Shell That Started It All *Vanessa Delnavaz*	
16:40	16:45	Meet the Mighty Mite: Amerodectes ischyros *Kevin Krajcir*	
16:45	16:50	Lockdown voyage: wherein Dr Hugh Scott, our most prolific curator of entomology, does not discover an Insect *Russell Stebbings*	
16:50	16:55	The challenges of the preparation, display and subsequent conservation of the world's largest leatherback turtle specimen *Julian Carter*	
16:55	17:00	Despite being more than 150 years old, this taxidermy of a little bustard still looks brand new *Lennart Lennuk*	
17:00	17:05	Most fairies fly, but this one digs: The Florida Museum of Natural History Mammals Collection's elusive, subterranean pink fairy armadillo specimen *Selby Olson*	
17:05	17:10	The Oldest Living Tree in the White Mountains *Erin Berkowitz* *	
17:10	17:15	Why cultivated plants matter: how chance and plants have collided through the ages enabling scientists to develop medical treatment *Lydia Walles*	
17:15	17:20	Hello old friend- Plantago ovata *Mandeep Matharu*	
17:20	17:25	Window to the Past *Jessica Lane*	
17:25	17:30	Wrap Up *Paul Mayer*	
18:00 – 20:00		**Meetings**	
		SPNHC Executive Meeting	Lecture 1, Appleton Tower
		NatSCA AGM	Lecture 2, Appleton Tower
		Specialist Interest Group Meeting	Lecture 3, Appleton Tower
		Specialist Interest Group Meeting	Lecture 4, Appleton Tower

*Pre-Recorded Presentation

	Specialist Interest Group Meeting	Lecture 5, Appleton Tower
20:15 – 23:15	Ceilidh	South Hall, Pollock Halls

Wednesday 8th June

08:00 – 17:30		Registration Open	McEwan Hall
09:00 – 17:00		Exhibition Open	McEwan Hall
09:30 – 11:00		**Concurrent Sessions – 5**	
		G6: General **Chair: Shelley James**	Lecture 1, Appleton Tower
09:30	09:45	Using Symbiota to establish a global, decentralized model for high-quality data aggregation:Novel concepts and designs to improve the interoperability of occurrence-based biodiversity data *Edward Gilbert **	
09:45	10:00	Adapting Arctos for Paleontology Collections *Nicole Volden*	
10:00	10:15	Little Brown Bugs: Machine Learning on Challenging Collections *Jeremy Miller **	
10:15	10:30	Flexible and scalable label generation workflows in support of collection digitization using persistent and machine-actionable identifiers *Christian Bölling*	
10:30	10:45	DINA – An Open-Source System with an Innovative Data Model for Collection Management *Falko Glöckler*	
10:45	11:00	Applying Colorimetry to Minerals: Limitations and Applications *Kathryn Royce*	
		G9: General **Chair: Yvette Harvey**	Lecture 2, Appleton Tower
09:30	09:45	Harbor Porpoise Time Machine: mounting a small cetacean to gain insights into how old specimens were prepared *Becky Desjardins*	
09:45	10:00	A Stable Future – The importance of stable and sustainable Oddy tested materials within taxidermy *Jazmine Miles Long*	
10:00	10:15	DORA for MoBBiDig: Unlocking of the German mollusc collection of the MfN Berlin through digitization *Nora Lentge-Maaß*	
10:15	10:30	Re-housing Taxidermy-mounted Bird and Mammal Specimens at the Michigan State University Museum *Laura Abraczinskas **	
10:30	10:45	Taxidermy Vertebrate Specimens at the Natural History Science Museum of University of Porto (MHNC-UP) and the need of an Illustrated Glossary for the Conservation Assessment *Mariana Costa*	
10:45	11:00	Caring for Insect Collections – taking our entomology training online *Ashleigh Whiffin*	
		(CC1) Connecting Communities to Natural History Collections **Chair: Jeanette Pirlo**	Lecture 3, Appleton Tower
09:30	09:45	Integrating African Natural History specimen data; current progress and future needs *Helen Barber-James*	

*Pre-Recorded Presentation

09:45	10:00	Culturally Responsive Undergraduate Science Education: A model for equity and social justice academic biology *Hillary Barron* *	
10:00	10:15	"One Specimen Many Stories", encouraging new visions and seldom heard voices about natural history specimens *Christopher Marshall*	
10:15	10:30	Creating Inclusive Spaces: Centering Gender Identity in Biodiversity Science and Natural History Collections *Sara Hansen*	
10:30	10:45	Neurodiverse communities as crucial contributors to paleontology exhibits and collections perspectives, using inclusive museum design and self-advocacy *Taormina Lepore*	
09:30	09:45	**(CT) Collection Theft and Security Monitoring of Collections** **Chair: Paul Mayer** "Keep it secret, keep it safe": Lessons learned from mineral collection security Erika Anderson *	Lecture 4, Appleton Tower
09:45	10:00	From Unknown Unknowns to Known Unknowns: A product of digitisation is a better understanding of the causes of collection loss Rachel Walcott	
10:00	10:15	**G12: General** SciCoMove: Scientific Collections on the Move: Provincial Museums, Archives, and Collecting Practices (1850–1950) *Patricia Mergen*	
10:15	10:30	Are you prepared? Preparation, response, and recovery of collections in unanticipated disasters *Mare Nazaire* *	
10:30	10.45	When Butterflies Don't Migrate Voluntarily: A 4,000-mile Moving Story *Cailin Meyer*	
10:45	11:00	Advancing Interdisciplinary Collaboration between Natural History and Cultural Heritage Collections *Kerstin Lehnert* *	
09:30	09:45	**(BB1) Back to Basics: Museum Techniques Skillshare** **Chair: Emily Braker and Genevieve Tocci** A Snake in the Glass: Wet tank setup and focus stack imaging method for reptile and amphibian specimens *Emily Braker*	Lecture 5, Appleton Tower
09:45	10:00	Smartphone microscopy – Tips for taking high-quality microscope images with a phone camera *Bob Gooday*	
10:00	10:15	Modular Solutions in Image digitization *Frederik Berger*	
10:15	10:30	Deciphering natural history and mapping the world through collection labels *Krisztina Lohonya*	
10:30	10:45	Using Excel Macros for Data Quality Assurance: Lessons Learned from a Coding Beginner *Larissa Welton*	
10:45	11:00	Sampling strategies, techniques and curation of the Swedish Environmental Specimen Bank *Anna Jerve*	
11:00 – 11:30		Refreshment Break	McEwan Hall
1:30 – 13:00		**Concurrent Sessions – 6**	
		G7: General **Chair: Nelson Rios**	Lecture 1, Appleton Tower

*Pre-Recorded Presentation



11:30	11:45	Data cleaning an iterative process: lessons learned from the second mass digitization project at Meise Botanic Garden *Henry Engledow*	
11:45	12:00	Harnessing the power of community science to digitize, transcribe and import preparation information into a collections management database system *Carolyn Levitt-Bussian*	
12:00	12:15	Mass Imaging and Transcription of Zoology Trait Data: Using Low Cost Tools and Community Science *Alyson Wilkins*	
12:15	12:30	(Re)using published georeferences with Biodiversity Enhanced Location Services (BELS) *Julie Allen*	
12:30	12:45	Scaling 3D Digitization of Natural History Collections: Use Cases from Anthropology & Entomology *Nelson Rios*	
12:45	13:00	Scaling up digitization in entomology collections – a new approach initiated and enabled by the Museum fuer Naturkunde Berlin, supported by Naturalis Biodiversity Center and realized by Picturae *Frederik Berger*	
11:30	11:45	**G10: General** **Chair: Bethany Palumbo** Updated, collated, recurated – it's the new Herbarium Handbook! *Nina Davies & Clare Drinkell*	Lecture 2, Appleton Tower
11:45	12:00	Herbarium backlogs: Challenge or opportunity? *Hannah Bendull*	
12:00	12:15	Resurrecting the orphaned Lord Fairfax Community College herbarium (LFCC) *Andrea Weeks*	
12:15	12:30	Best Practices for the Preservation Fluid Collections: Where are we? John Simmons	
12:30	12:45	Monitoring of temperature and relative humidity in the biological collections of the Museo Argentino de Ciencias Naturales "Bernardino Rivadavia" in Buenos Aires city *Soledad Tancoff **	
12:45	13:00	Tackling Pests in the Public Eye – Procedure for Removing Mold and Dermestids from Herpetology Skeletal Specimens *Stevie Kennedy-Gold **	
11:30	11:45	**(CC2) Connecting Communities to Natural History Collections** **Chair: Jeanette Pirlo** Re-connecting communities in biodiverse places to their biological heritage *Quentin Groom*	Lecture 3, Appleton Tower
11:45	12:00	Changing Natures. Developing a Shared Participatory, Digital Collection of the Anthropocene *Elisabeth Heyne **	
12:00	12:15	Building the Community through Biodiversity Literacy *Anna Monfils*	
12:15	12:30	Boots on the Ground: Success Stories of Reaching Underrepresented Groups across Puerto Rico *Janelle A. Peña-Jiménez **	
12:30	12:45	And We're Live: Utilizing Livestreaming and Digital Technology to Engage Audiences with Natural History Collections *Gabriele-Philip Santos*	
12:45	13:00	Bringing Florida Museum of Natural History 3D Collections into K-12 Schools to Teach About Adaptations, Evolution, and Climate Change *Stephanie Killingsworth*	

*Pre-Recorded Presentation



11:30	11:45	**(CS1) Collection space in the 21st century and beyond** **Chair: Luc Willemse** Looking into the future: A systematic way of collection space planning *Thomas Schossleitner*	Lecture 4, Appleton Tower
11:45	12:00	Planning a new collection space for the Royal Horticultural Society's specialist herbarium of ornamental plants *Yvette Harvey*	
12:00	12:15	A Swiss sense of compromise: Planning a new museum building in an eco-friendly city *Alice Cibois*	
12:15	12:30	Focusing on Users and Maximising Opportunities: the Sedgwick Museum Collections Research Centre, University of Cambridge *Liz Hide*	
12:30	12:45	CryoArks – The UK's first zoological biobank *Andrew Kitchener*	
11:30	11:45	**(BB2) Back to Basics: Museum Techniques Skillshare** **Chair: Emily Braker & Genevieve Tocci** Herbarium Life: Shipping Cryptogamic Specimens *Genevieve E. Tocci*	Lecture 5, Appleton Tower
11:45	12:00	Unique Approaches to Packing Vertebrate Paleontological Specimen Loans *Adrienne Stroup*	
12:00	12:15	Freeze it all! An IPM case study of the Angelo State Natural History Collections *Serina Brady **	
12:15	12:30	Press Juicy, Sticky Plants with Tissue Paper and Pillows of Silica to Prevent Mould and Retain Colour *Nadia Cavallin **	
12:30	12:45	Osteoscribing: writing on bones *Jacki Whisenant*	
12:45	13:00	An advanced method of non-traditional bird skin preparation, to ease applications of scientific methods and enhance the value of avian collections *Bernhard Bock*	
13:00 – 14:00		Lunch	McEwan Hall
13:15 – 14.00		LGBTQ+ Informal Session	Foyer 5 McEwan Hall
14:00 – 15:30		**Concurrent Sessions – 7**	
14:00	14:15	**(VA1) Virtual Access – transitioning natural history collections for digital-on-demand** **Chair: Sandy Knapp** The SYNTHESYS+ Virtual Access experiment *Vince Smith*	Lecture 1, Appleton Tower
14:15	14:30	Synthesys+ Virtual Access projects at the Museum für Naturkunde Berlin – data, experiences and outcomes *Eileen Westwig*	
14:30	14:45	Considerations for Digitization Requests and Digital Asset Rights of Smithsonian Paleobiology Collections *Jessica Nakano*	
14:45	15:00	What we did in the shadows: Digitising the London NHM bat collection for the Covid-19 Chiroptera Knowledge Base *Phaedra Kokkini*	
15:00	15:15	Ask and Ye Shall Receive: Implementation of a Digital Entomological Loans Workflow *Peter Wing*	

*Pre-Recorded Presentation

		(DC) DemoCamp – A live demonstration of software and applications relevant to the management, analysis, dissemination, and use of natural history collections **Chair: Jason Best, Erica Krimmel, Caitlin Chapman**	Lecture 2, Appleton Tower
14:00	14:15	New Symbiota Features to Support Digital and Extended Specimen Data *Katelin Pearson*	
14:15	14:30	TaxonWorks: A User's Perspective: Digitizing a specimen start to finish *Michelle Kohler*	
14:30	14:45	Arctos: Collection Data Management, Publication, and Community in Support of the Extended Specimen *Teresa Mayfield-Meyer*	
14:45	15:00	An integrated knowledge hub for the natural science collections community – the example of the DiSSCo Knowledgebase *Julia Pim Reis*	
15:00	15:15	Global Names Architecture tools for verification, normalization, and detection of scientific names *Dmitry Mozzherin **	
15:15	15:30	Collaborative Georeferencing Natural History Collections using GEOLocate/CoGe *Nelson Rios*	
		(CC3) Connecting Communities to Natural History Collections **Chair: Jeanette Pirlo**	Lecture 3, Appleton Tower
14:00	14:15	Like Baseball Cards: Distributing Specimens through the Curriculum *Maura Flannery **	
14:15	14:30	Successes in utilizing museum collections and community collaborations to study the establishment of eastern fox squirrels in Utah *Katrina Derieg*	
14:30	14:45	Taking Up Space: The Sedgwick Museum's co-curated Community Cabinet *Rob Theodore*	
14:45	15:00	Digitizing the Ordovician from Biodiversification to Pandemic: Adapting to complete an Institute of Museum and Library Services (IMLS) funded project through the pandemic *Patricia Coorough Burke*	
15:00	15:15	Implementing 'Science Up Close': an innovative researcher-curated exhibition at the Florida Museum of Natural History *Rachel Narducci*	
15:15	15;30	Using public programs and classroom team-based research to collect, digitize, and study large collections of fossil alligators from Florida *Mithcell Riegler*	
		(MC1) Moving collections: curse, blessing or ...? **Chair: Steven van der Mije**	Lecture 4, Appleton Tower
14:00	14:15	Bringing together 13 million specimens: A case study on relocating and uniting CSIRO's National Research Collections *Margaret White **	
14:15	14:30	The Natural History Museum on the Move: from Bloomsbury via South Kensington to Harwell a 150-year journey! *Clare Valentine*	
14:30	14:45	From bee to bone – theory and praxis of a large scale collection move *Meta Friese*	
14:45	15:00	First we take the earthquake: Moving Bird and Mammal collections of the Croatian Natural History Museum *Irena Grbac **	
15:00	15:15	Two birds one stone: Between object location and digitisation – the benefits of QR-codes *Heike Straebelow*	
		(NW1) Natural History Wet collections	Lecture 5,

*Pre-Recorded Presentation



14:00	14:15	**Chair: Laura Brambilla** Teaching specimens: masterpieces of preparation and their problematic histories *Fabian Neisskenwirth **	Appleton Tower
14:15	14:30	Preserving colour of wet specimens – The need to understand their uses and values for the collection *Elodie Granget*	
14:30	14:45	Past and Present Teaching: Returning to the Cole Museum of Zoology's original function as a university-level teaching resource, by developing a new museum space and enabling undergraduate students to safely undertake remedial conservation work within our fluid-preserved collections *Claire Smith*	
14:45	15:00	An introduction to the marine invertebrate wet collections at National Museums Scotland *Fiona Ware*	
15:00	15:15	How not to – damages in fluid-preserved collections caused by renovation works *Dirk Neumann*	
15:15	15:30	Physicochemical analysis of sealants from Anatomic collection in fluid of the MNHN: evolution of historical recipes *Baptiste Zuber*	
15:30 – 16:00		Refreshment Break	McEwan Hall
16:00 – 17:30		**Concurrent Sessions – 8**	
16:00	16:15	**(VA2) Virtual Access – transitioning natural history collections for digital-on-demand** **Chair: Sandy Knapp** Mass digitisation of freshwater bioindicators: The NHM's Ephemeroptera, Plecoptera and Trichoptera Collections *Robyn Crowther*	Lecture 1, Appleton Tower
16:15	16:30	Diversifying virtual access: going for 3D *Pierre-Yves Gagnier*	
16:30	16:45	The future of digitisation-on-demand for natural history collections *Sandra Knapp*	
16:45	17:00	**G8: General** Mollusca Types in Britain & Ireland: Founding a Union database *Jonathan Ablett*	
17:00	17:15	Preserving the Genomes of Type Specimens: Lessons from the Museum of Comparative Zoology *Rina Morisawa*	
16:00	16:15	**(NF) Non-Fungible Tokens (NFTs), Blockchain, and Natural History Museums** **Chair: TBC** The VERO: An NFT for increasing the production, flow and distribution of information associated with specimens *Samuel Bolton **	Lecture 2, Appleton Tower
16:15	16:30	Clean NFTs: how Tezos can build long-lived, sustainable digital assets *Anil Madhavapeddy*	
16:00	16:15	**(YS) Year of the Student: Attracting College Students to Campus Museums** **Chair: Patti Wood Finkle** More than a "mineral museum": refocusing, reinterpreting, and striving to remain relevant on a college campus *Julianne Snider*	Lecture 3, Appleton Tower

*Pre-Recorded Presentation

16:15	16:30	Running a Museum on Empty: Creative ways to maintain a museum and create new exhibits on a shoestring budget *Ariana Lushtak*	
16:30	16:45	The Study Gallery: Object-based Teaching through Collaborative Exhibits *Nicole Palffy-Muhoray*	
16:45	17:00	Year of the Student: Attracting College Students to Campus Museum *Patti Wood Finkle & Valerie Innella*	
17:00	17:15	**G11: General** Renewing Curation of the Science Museum of Minnesota's Biology Collection *Catherine Early*	
16:00	16:15	**(MC2) Moving collections: curse, blessing or ...?** **Chair: Sophie Boulom** Moving collections: Curse, Blessing or Opportunity? *Dan Pemberton*	Lecture 4, Appleton Tower
16:15	16:30	The fragility of frozen collections and the common and unique considerations for a large-scale collection move *Kirsty Lloyd*	
16:30	16:45	Moving Collections in a Pandemic? No Problem! How Planning and Preparation Saved the Day *Margo Yousse*	
16:45	17:00	Moving around living collection in Meise Botanic Garden: the Green Ark project *Marc Reynders* & Patricia Mergen*	
17:00	17:30	'I didn't know we had that!' – Bringing insight and order into a herbarium backlog when moving to a new depot *Marnel Scherrenberg*	
16:00	16:15	**(NW2) Natural History Wet collections** **Chair: Laura Brambilla** How to CT scan "the gorilla in the room" without going ape *Gregory Watkins-Colwell*	Lecture 5, Appleton Tower

16:15	16:30	Death Re-enlightened: The Conservation of the Wet Anatomical Preparations of Frederik Ruysch, the Rembrandts among Fluid Preserved Specimens *Andries van Dam*	
16:30	16:45	Characterization of old jar sealants: use of organic membrane and metal foils *Sophie Cersoy*	
16:45	17:00	Fragmented DNA in formalin-preserved specimens and where to find it *Erin Hahn* *	
17:00	17:15	Dip a toe into wet collection of the National Museum of Ireland Natural History *Amy Geraghty*	
17:15	17:30	Posters Flash Presentations	
19:00 – 23:30		Gala Dinner	National Museum of Scotland

Thursday 9th June

PLEASE NOTE ALL WORKSHOPS AND TOURS MUST BE PRE BOOKED

08:00 – 17:30	Registration Open	Appleton Foyer

*Pre-Recorded Presentation



09:00 – 17:00	Exhibition Open	Appleton Foyer
09:00 – 10:30	**Workshops**	
	Digital Specimens and Extending them – Steps towards Implementation	Lecture 1, Appleton Tower
	People are unique, unique people are priceless	Lecture 2, Appleton Tower
	Workshop on Nagoya Protocol and Access and Benefit Sharing (ABS)	Lecture 3, Appleton Tower
	Art in the Museum: Natural Science Illustration and Artist Residency Programs	M2, Appleton Tower
	Strictly Planning: How to Organize a Digitization Project and Fill your Dance Card	Lecture 5, Appleton Tower
09:30 – 10:30	National Museums Scotland Collections Tours Conservation Labs, Invertebrate Biology, Vertebrate Biology, Palaeontology, Earth Science	National Museums Collections Centre, 242 West Granton road EH5 1JA
10:00 – 11:00	National Museums Scotland Library Tour	National Museums Scotland, Chambers Street EH1 1JF
10:00 – 11:00	Royal Botanic Garden Living Collection Tour	Royal Botanic Garden Edinburgh, 20A Inverleith Row EH3 5LR
10:30 – 11:00	Refreshment Break	Appleton Foyer
10:30 – 11:30	National Museums Scotland Collections Tours Conservation Labs, Invertebrate Biology, Vertebrate Biology, Palaeontology, Earth Science	National Museums Collections Centre, 242 West Granton road EH5 1JA
11:00 – 12:00	National Museums Scotland Library Tour	National Museums Scotland, Chambers Street EH1 1JF
11:00 – 12:00	Royal Botanic Garden Living Collection Tour	Royal Botanic Garden Edinburgh, 20A Inverleith Row EH3 5LR
11:00 – 12:30	**Workshops**	
	DINA Collection Management – Hands On Workshop	Lecture 1, Appleton Tower
	People are unique, unique people are priceless	Lecture 2, Appleton Tower
	Workshop on Nagoya Protocol and Access and Benefit Sharing (ABS)	Lecture 3, Appleton Tower
	Art in the Museum: Natural Science Illustration and Artist Residency Programs	Lecture 4, Appleton Tower
	Strictly Planning: How to Organize a Digitization Project and Fill your Dance Card	Lecture 5, Appleton Tower
12:30 – 13:30	Lunch & Exhibition	Appleton Foyer
13:30 – 15:00	**Workshops**	
	Application of BIOfid tools for extracting data from biodiversity literature	Lecture 1, Appleton Tower
	Capturing community expertise: A SPNHC wiki edit-a-thon	Lecture 2, Appleton Tower
	Community engagement workshop on the new taxonomic backbone development by Global Biodiversity Information Facility (GBIF) and Catalogue of Life (COL)	Lecture 3, Appleton Tower
	Art in the Museum: Natural Science Illustration and Artist Residency Programs	Lecture 4, Appleton Tower
	Collection space in the 21st century and beyond	Lecture 5, Appleton Tower
14:00 – 15:00	National Museums Scotland Library Tour	National Museums Scotland, Chambers Street EH1 1JF
14:00 – 15:00	National Museums Scotland Collections Tours Conservation Labs, Invertebrate Biology, Vertebrate Biology, Palaeontology, Earth Science	National Museums Collections Centre, 242 West Granton road EH5 1JA

*Pre-Recorded Presentation



14:00 – 15:00	Royal Botanic Garden Living Collection Tour	Royal Botanic Garden Edinburgh, 20A Inverleith Row EH3 5LR
15:00 – 15:30	Refreshment Break	Appleton Foyer
15:00 – 16:00	National Museums Scotland Collections Tours Conservation Labs, Invertebrate Biology, Vertebrate Biology, Palaeontology, Earth Science	National Museums Collections Centre, 242 West Granton road EH5 1JA
15:00 – 16:00	Royal Botanic Garden Living Collection Tour	Royal Botanic Garden Edinburgh, 20A Inverleith Row EH3 5LR
15:30 – 17:00	**Workshops**	
	Application of BIOfid tools for extracting data from biodiversity literature	Lecture 1, Appleton Tower
	Capturing community expertise: A SPNHC wiki edit-a-thon	Lecture 2, Appleton Tower
	Community engagement workshop on the new taxonomic backbone development by Global Biodiversity Information Facility (GBIF) and Catalogue of Life (COL)	Lecture 3, Appleton Tower
	Art in the Museum: Natural Science Illustration and Artist Residency Programs	Lecture 4, Appleton Tower
	Collection space in the 21st century and beyond	Lecture 5, Appleton Tower
16:00 – 17:00	National Museums Scotland Library Tour	National Museums Scotland, Chambers Street EH1 1JF
17:15 – 19:15	SPNHC AGM	Lecture 1, Appleton Tower
17:15 – 18:45	BHL Member Council Business Meeting	Lecture 2, Appleton Tower
19:30 – 23:00	Pub Quiz	Counting House

Friday 10th June

PLEASE NOTE ALL WORKSHOPS MUST BE PRE-BOOKED

08:00 – 17:30	Registration Open	RBGE
09:00 – 10:30	**Workshops**	
	The Strategy Surgery: Strategic Management of Natural Science Collections	Lecture Room 1
	Dirty Data Dancing: Cleaning, standardization, and publishing for the judges	Botanic Cottage
	Shipping Workshop	Lecture Theatre
	Cleaning Your Collections: Tips for Non-Conservators	Teaching Lab
10:30 – 11:00	Refreshment Break	RBGE
11:00 – 12:30	**Workshops**	
	The Strategy Surgery: Strategic Management of Natural Science Collections	Lecture Room 1
	Dirty Data Dancing: Cleaning, standardization, and publishing for the judges	Botanic Cottage
	Shipping Workshop	Lecture Theatre
	Cleaning Your Collections: Tips for Non-Conservators	Teaching Lab
12:30 – 13:30	Lunch & Exhibition	RBGE
13:30 – 15:00	**Workshops**	
	Curating community knowledge of indigenous medicinal plants in global tree planting and biodiversity net gain activities	Lecture Room 1
	Dirty Data Dancing: Cleaning, standardization, and publishing for the judges	Botanic Cottage
	Shipping Workshop	Lecture Theatre

*Pre-Recorded Presentation

	The art and science of imaging specimens: creativity, imagination and detail	Teaching Lab
15:00 – 15:30	Refreshment Break	RBGE
15:30 – 17:00	**Workshops**	
	Curating community knowledge of indigenous medicinal plants in global tree planting and biodiversity net gain activities	Lecture Room 1
	Dirty Data Dancing: Cleaning, standardization, and publishing for the judges	Botanic Cottage
	Shipping Workshop	Lecture Theatre
	The art and science of imaging specimens: creativity, imagination and detail	Teaching Lab

*Pre-Recorded Presentation