SPNHC 2023 Symposia

1) General Member Symposium
2) Back to Basics: Museum Techniques Skillshare
3) Back to the future: How can museum buildings enhance preventive conservation and collection management in changing environments?
4) Broadening Access and Use of Natural History Collections Through Innovative Approaches and Engagement
5) ~~Collection Theft and Security Monitoring of Collections~~ **canceled**
6) Collections and Conservation Work Within Professional Societies and Organizations
7) DemoCamp: A live demonstration of software and applications relevant to the management, analysis, dissemination, and use of natural history collections
8) Hidden Diversity in Natural History Collections
9) Narrowing the Gaps: The role of digital infrastructure in shortening the distance between physical collections and their derivative research products
10) Return of the Specimens: Repatriation of Natural History Objects
11) ~~RFID Technology and its Future in Natural History Collections~~ **canceled**
12) Specimen Conservation for Non-Conservators: Common issues, methods, and considerations
13) Specimen Spotlight
14) ~~The Degreasing Challenge: Bone preparation for osteological collections~~ **canceled**
15) Tips and Tools for Managing Digital Biodiversity Specimens (featuring Symbiota)
16) Understanding the Regulatory Landscape for Specimens and Biomonitoring
17) ZooMu: Developing collaborative pathways for sharing Zoo and Museum biodiversity resources
18) Conservation Conversation Cafe: Biodiversity conservation work within professional societies and organizations
19) CLOSED: Digitizing Marine Invertebrate Collections: Lessons in collaboration from DigIn and ESB
20) ~~CLOSED: 'UnNatural History' - Working with Artists and Scientists in Natural History Collections to Understand Biodiversity Loss and Climate Change~~ **canceled**

1) General Member Symposium

2) Back to Basics: Museum Techniques Skillshare

Organizer & Moderator: Emily M Braker, University of Colorado Museum of Natural History, emily.braker@colorado.edu
Co-Moderator: Genevieve Tocci, Harvard University Herbaria, glewis-g@oeb.harvard.edu"

Symposium, Open

While collections management literature and online resources are widely available, the specifics of day-to-day curatorial work are often learned on the job. This symposium aims to capture some of the peer-to-peer knowledge transfer that accompanies museum tasks and share it within a conference setting. We invite collection stewards from all disciplines and career-stages to present 'how-to' tutorial talks on everyday curation techniques, such as packing loans, monitoring for pests, preparing specimens, imaging collections, and myriad others. In particular, we want to know how something is done at your institution, including workflows and tips from lessons learned along the way. Whether you are new to the field, a mid-career professional seeking to add a new skill, or a veteran interested in hearing from those outside your organization, we envision this symposium as a valuable forum to communicate knowledge, with time for questions following each talk.

Although highlighting best practice guidelines is encouraged, we acknowledge that many institutions operate with resource constraints and that multiple approaches to collection curation exist. We welcome your curation technique contributions if you have implemented a practical solution, worked wonders on a shoestring budget, or applied modern methodologies to century-old practices. In collaboration with the Best Practices Committee, presenters are expected to share their slides in pdf format with the organizers, as well as provide "key points" formatted for sharing on the SPNHC wiki. Presenters may also include instructional videos, which will be added to the SPNHC YouTube channel following the symposium."

Preferred format(s): Oral presentations
Keywords: best practices, techniques, curation, curatorial, skillshare

3) Back to the future: How can museum buildings enhance preventive conservation and collection management in changing environments?

Organizer & Moderator: Dirk Neumann, Leibniz Institute for the Analysis of Biodiversity Change, Museum of Nature Hamburg, d.neumann@leibniz-lib.de
Co-Moderator: Peter Giere, Leibniz Institute for Evolution and Biodiversity Science, Museum für Naturkunde Berlin, Peter.Giere@mfn.berlin

Symposium, Open

Sustainable concepts for natural history museums in times of climate change growing economic challenges and rapid social transformation was the motto of the SPNHC conference in Berlin

2016: On the way to the Green Museum: Managing risk and sustainability. Eight years later, confronted with multiple crises and increased societal responsibility, the need to reduce the environmental footprint and economic costs of preservation for Natural History Museum has never been more relevant.

In this symposium, we want to look back into the future. A key feature of historic museum buildings has been resilience through the design of the building shell that can keep the conditions for the stored objects within reasonable limits. Technological advances of the 20th century allowed to control environmental parameters inside the storage rooms and buildings more actively. Have these advances really led to better storage conditions? Further aspects of this symposium are the functional arrangement of storage and working spaces and a critical evaluation of collection cabinets. In the past, the arrangement of the storage rooms and associated preparation rooms developed from originally more centralized units towards specialized labs or units with specific functions. How did these principle changes influence the organization, workflows and processes in collections? With this symposium we want to connect to the theme of the Berlin meeting, evaluate what has been achieved since then by comparing current and past requirements of modern museum buildings, storage rooms and functional units. We want to reflect what can be deduced from the historic building designs for the building of efficient modern museum buildings that passively stabilize storage climates and thus reduce the energy consumption and maintenance costs of climate control units.

Preferred format(s): Lightning talks, Oral presentations
Keywords: Museum, building shell, construction, sustainability, maintenance costs

4) Broadening Access and Use of Natural History Collections Through Innovative Approaches and Engagement

Organizer & Moderator: Jeanette Pirlo, California State University, Stanislaus, Florida Museum of Natural History, jpirlo@csustan.edu
Co-Moderator: Carmi M Thompson, The Ohio State University, thompson.4455@osu.edu
Co-Moderator: Taormina Lepore, University of California, Berkeley, tlepore@berkeley.edu

Symposium, Open

Natural history collections (NHCs) chronicle Earth's biodiversity through the physical and digital archiving, as well as curation of biological, geological, and other natural history specimens. These records typically exclude individuals with expertise or community members who benefit and utilize these archives in non-traditional research capacities There is a long history of scientists working with local knowledge keepers, often excluding those contributions or shared knowledge. NHCs have not always built collections and experiences for the public in a way that honors different knowledge systems and impact on community members. NHC expansion through participation from community scientists has made strides toward including and respecting perspectives from historically excluded communities. Significant work remains to create more inclusive NHCs, broaden our understanding of the natural world by inviting and honoring knowledge from different viewpoints, and gain a contextual understanding of

biodiversity. There are disparities between communities when engaging with NHCs and the need to decenter Western ideals of collections management. As we recenter as a community, we have the opportunity to intentionally engage and create open, accessible, and inclusive experiences for diverse potential voices that are crucial to biodiversity science.

In envisioning the future of our NHC community, there exist increased efforts to make community science more inclusive. Previous scholarship includes professional workshops on curation for avocational scientists, involving historically excluded learners, and innovative approaches to engaging communities through proactive and compassionate outreach. In this work, we take the closed science legacy of natural history, and make it open and accessible to all communities, interweaving indigenous and local knowledge in our practice of biodiversity science and supporting emergent scientists. This session will highlight successes and challenges posed as we incorporate communities into NHCs and collaboratively discuss paths forward into the future. We welcome abstract submissions that span, align with, and build upon these motivations.

Preferred format(s): Panel discussion(s), Lightning talks, Oral presentations
Keywords, Broadening Access, Community Science, Inclusion, Education, Outreach

~~5) Collection Theft and Security Monitoring of Collections~~ Canceled

6) Collections and conservation work within professional societies and organizations

Organizer & Moderator: Libby Ellwood, iDigBio, ellwoodlibby@gmail.com
Co-Moderator: Jutta Buschbom, Statistical Genetics, jutta.buschbom@statistical-genetics.de

Symposium, Open

Since 2019, the SPNHC Biodiversity Crisis Response Committee has been actively engaging our global community in advancing the role of collections in biodiversity conservation. Likewise, members of other professional societies and organizations, and the committees within them, have been pursuing comparable efforts. While there have been interactions and exchanges among several of these entities, particularly via webinars, symposia, and conference activities, there is still great potential for deeper collaboration and for involving groups that have been underrepresented in these discussions. In this symposium, we bring together members of other global, regional, and local professional societies from across the world who are, to various degrees, working at the intersection of natural history collections and conservation.

Presentations in this symposium will include those from individuals representing a variety of societies including societies that are taxonomically-focused, application- and policy-focused as is the case with conservation action-oriented groups, and from broad fields of study and engagement such as ecology, agriculture/forestry/fisheries, and data science. Our aim with this symposium is to learn from other societies, to build bridges with collections and conservation communities in other societies, and to consider mutually-beneficial collaborative activities that will ultimately contribute to combatting the biodiversity crisis. The symposium will be

multifaceted in its presentation of ideas that will be of interest to practitioners, to those that are actively involved in professional societies, as well as to leadership of societies who are undoubtedly faced with the need and desire to incorporate biodiversity conservation into many aspects of society work. This symposium is co-sponsored by iDigBio.

Preferred format(s): Oral presentations
Keywords: biodiversity conservation, biodiversity crisis, committees, societies

7) DemoCamp - A live demonstration of software and applications relevant to the management, analysis, dissemination, and use of natural history collections.

Organizer & Moderator: Jason Best, Botanical Research Institute of Texas, jbest@brit.org

Symposium, Open

Computer software is an increasingly critical component of natural history collections. Ongoing efforts to digitize natural history collections will eventually culminate in a comprehensive digital record of biodiversity preserved and represented in natural history collections worldwide. This significant expansion of digital collections will further cement the important role of software in the management, analysis, and dissemination of natural history collections.

Since its debut at SPNHC 2009, DemoCamp has provided a venue for software developers, biodiversity informaticians, digitization managers, and collection managers to convene and share innovative approaches for the use of technology to enhance the management and use of natural history collections.

The format of DemoCamp dictates that software be demonstrated “live, without a net” and forbids the use of slideshows. Each presenter is allotted time for demonstrating the software as well as questions from the audience. This format ensures that only functional software is presented and that the audience sees all the details of the features and functionality of the software.

Preferred format(s): Oral presentations
Keywords: software, digital

8) Hidden Diversity in Natural History Collections

Organizer & Moderator: Klara Scharnagl, University Herbarium, University of California Berkeley, lichen_curator@berkeley.edu

Symposium, Open

Natural history collections are critical vouchered records of earth's biodiversity. Yet, the species name on a specimen label only tells part of the story. Many natural history specimens contain multiple species, even if only one is recorded. For example, where might we find lichens in a natural history collection? A lichen species growing on a chunk of rock is often accompanied by

multiple lichen neighbors which do not end up on the specimen label; a shell of an intertidal marine snail in an entirely different museum may contain lichen species; tropical leaf specimens in the vascular plant section of the herbarium also often contain epiphytic lichens and bryophytes! We now know that every species is also a holobiont, containing myriad additional species in its microbiome. In addition, a collection could be assessed based upon its phylogenetic as well as taxonomic diversity. Unlike virtual records and observations, physical specimens within natural history collections provide a unique place to explore cryptic diversity. In this symposium we will highlight the opportunities and challenges presented by the hidden diversity in natural history collections.

Preferred format(s): Oral presentations
Keywords: cryptic diversity, collections, specimens, phylogenetic

9) Narrowing the gaps: The role of digital infrastructure in shortening the distance between physical collections and their derivative research products

Organizer & Moderator: Matthew J Yoder, University of Illinois, Prairie Research Foundation, Illinois Natural History Survey, Species File Group, diapriid@gmail.com
Co-Moderator: Deborah Paul, University of Illinois, Prairie Research Foundation, Illinois Natural History Survey, Species File Group, dlpaul@illinois.edu"

Symposium, Open

We explore the premise that as collections become increasingly integrated with the digital world, the time between accession of physical specimens (if indeed a physical specimen is even the core of the accession) and the scientific product derived from those specimens should decrease. Whether or not this is a reality (a topic of this symposia), this seems to be a reasonable goal if not for the present then for the long term. How then should we evolve digital infrastructure (for example digitization software, tools that capture metadata in the field, and authoritative references), so that they facilitate narrowing this gap? Within this context this symposia will explore the themes of latency, identity, open-source software, software architecture, researchers as digital infrastructure creators and how these might evolve into the distant future. Finally, how might the role of the collection manager change as this distance is narrowed, perhaps to nothing, in the distant future?

Preferred format(s): Panel discussion(s), Oral presentations
Keywords: Digital infrastructure, research products, tools, identify, latency

10) Return of the Specimens - Repatriation of Natural History Objects

Organizer & Moderator: Mike G Rutherford, The Hunterian, University of Glasgow, mike.rutherford@glasgow.ac.uk

Symposium, Open

The return of natural history objects to their countries of origin is a newly evolving area of the current repatriation process being undertaken by many western museum collections. The rarity of a specimen, based on factors such as endemism and conservation status, can add much symbolic value to a return especially to a country that currently has no examples of endemic specimens in their own collections. Limitations based on available resources in the countries of origin and funding for the long term care of returned specimens can be one area of concern and discussion of this issue is welcomed. Projects involving virtual and digital repatriations are also welcome.

The returning of objects can be the key to opening up further opportunities for collaboration between institutions such as museums, universities, governmental bodies and NGOs in areas from scientific research and training to historical, societal and artistic projects.

This symposium will look at case studies of such undertakings, examining the methods, benefits, problems and outcomes.

Preferred format(s): Panel discussion(s), Oral presentations
Keywords: repatriation, return, endemic, extinct, collaboration

~~11) RFID technology and its future in natural history collections~~ Canceled

12) Specimen Conservation for Non-Conservators: Common Issues, Methods, and Considerations

Organizer & Moderator: Sarah Taylor, G.H. Torrey Herbarium, University of Connecticut, sarah.taylor@uconn.edu
Co-Moderator: Mariana Di Giacomo, Peabody Museum, Yale University, mariana.digiacomo@yale.edu

Symposium, Open

Many natural history collections do not have a dedicated conservator on staff, yet all potentially face specimen conservation issues. Collections managers may not have the training or experience to assess a specimen's conservation needs and/or appropriately address perceived issues. However, in many cases collections care staff can successfully address uncomplicated specimen conservation issues. The ability to recognize a conservation issue early and take appropriate steps to mitigate damage can prolong the lifespan of specimens for scientific, educational, and outreach purposes. Furthermore, understanding when to enlist a trained conservator for specimen assessment and repair is critical knowledge for collections managers.

Presentations on the topic of natural history specimen conservation including case studies, mini tutorials, specimen assessment recommendations, health and safety guidance, general advice, activities to avoid, and more are all welcome. As we explore the conference theme of "Taking the Long View," this symposium aims to share information that will empower collections managers and others to ensure that specimens retain their value and utility far into the future.

Preferred format(s): Panel discussion(s), Oral presentations
Keywords: specimen conservation, assessment, repair, conservator

13) Specimen Spotlight

Organizer & Moderator: Paul S Mayer, The Field Museum, pmayer@fieldmuseum.org

Symposium, Open

We are looking for short, lightning-round type talks on one special specimen in your collection. Something that has an amazing story to tell. Why that specimen is your favorite or is critical to science or education. Why does it matter? Why is it important? What makes it important? What work have you done on it? Please be creative and if you have an idea, try it and please feel free to email me any questions you might have.

Talks will be limited to 5 minutes and just 1 or 2 slides. The audio will be recorded and presentations posted on our SPNHC YouTube Channel."

Preferred format(s): lightning-round
Keywords: Specimen Spotlight, Collection highlights

~~**14) The Degreasing Challenge: Bone preparation for osteological collections**~~ **Canceled**

15) Tips and tools for managing digital biodiversity specimens (featuring Symbiota)

Organizer & Moderator: Katie Pearson, Arizona State University; iDigBio; Cal Poly State University, San Luis Obispo, kdpearso@asu.edu
Co-Moderator: Lindsay Walker, Arizona State University; iDigBio, ljwalke5@asu.edu

Symposium, Closed

Global natural history collections are tackling similar challenges in the curation and digitization of their specimens, and many have developed creative solutions that involve Symbiota software. In this symposium, we will share information about these workflows and tools so they may be leveraged by the broader community. We focus specifically on new developments that support linkage of Digital Extended Specimen data, such as trait and genetic data, associated occurrences, and image tags. This symposium is sponsored by iDigBio and the Symbiota Support Hub.

Preferred format(s): Panel discussion(s), Oral presentations
Keywords: specimens, digitization, digital extended specimen, data management, collection management system

16) Understanding the regulatory landscape for specimens and biomonitoring

Organizer & Moderator: Breda M Zimkus, Museum of Comparative Zoology, Harvard University, bzimkus@oeb.harvard.edu
Co-Moderator: TBD (member of SPNHC Legs and Regs Committee)

Symposium, Open

The regulatory landscape for research collections is complex, constantly changing, and can lead to major issues for those collecting and managing biodiversity material. Different interpretations of current legislation and unclear guidelines may cause delays in permit approvals or shipments and even loss of specimens. The SPNHC Legislation and Regulation committee will host a symposium where we share issues discussed at recent committee meetings, such as the use of Environmental DNA (eDNA) in biomonitoring research (i.e., challenges associated with transporting and managing samples without species identifications). The symposium presentations will also be informed by a survey of the SPNHC community to identify the issues currently most affecting biodiversity collections. The goal is to identify the regulatory agencies associated with recent challenges and foster discussion to facilitate a common understanding of how biodiversity collections are collected, managed, and used in research. A panel discussion will address outstanding issues where multiple agencies or differing interpretations of the law may be involved with the aim of identifying common vocabularies and/or workflows that will streamline processes for both biodiversity collection managers and regulatory agencies.

Preferred format(s): Panel discussion(s), Oral presentations
Keywords: Scientific collections, Regulations, Permitting, Inspection, Agencies

17) ZooMu: Developing collaborative pathways for sharing Zoo and Museum biodiversity resources

Organizer & Moderator: Gregory Watkins-Colwell, Yale Peabody Museum of Natural History, gregory.watkins-colwell@yale.edu
Co-Moderator: Shannen Robson, Natural history Museum of Los Angeles county, srobson@nhm.org

Symposium, Open

Both museums and zoological institutions hold a wealth of unique biological resources in their collections. Natural history museums hold critical preserved specimens and their associated data. Zoos and aquaria are transitioning from primarily live animal exhibitions to biodiversity conservation, focusing more on ways to enhance their contribution to the advancement of biological sciences. Over the past few years, the group known as “ZooMu” (for Zoo and Museum network) has held workshops and webinars dedicated to bridging the gap between these two types of biological collections. These efforts have initiated a much-needed discourse on the underutilization of live and preserved collections and the tremendous complimentary capacity they hold for scientific research and biodiversity conservation.

Beyond the vast amount of basic life history information, zoos also possess a detailed individual-level data as well as veterinary imagery, tissue samples, and histological samples. However, one critical barrier to utilization is that these data are not publicly accessible. This limitation of access is also a barrier to equity, with the ability to engage with or benefit from these biological collections restricted to the established, privileged few. Consequently, despite the obvious value of zoo collections, they remain an untapped resource for the larger scientific community. Additionally, most zoos do not have the personnel or familiarity with natural history collection best practices to archive specimens and samples beyond the lifespan of the animal. Museums have specialized expertise in curation, therefore collaborations between zoos and museums can help ensure that these resources are curated in the best way possible.

This goal of this symposium is to solicit discussion from those who work with biological collections, living or preserved, and share efforts to collaborate across institutions. Such cross-disciplinary symposia help remove barriers to specimen and information sharing and are a significant benefit to the Society.

Preferred format(s): Oral presentations
Keywords: Zoos, Museums, biodiversity, collaboration, cross-disciplinary, ZooMu

18) Conservation Conversation Cafe: Biodiversity conservation work within professional societies and organizations

Co-Organizer: Jutta Buschbom, Statistical Genetics, jutta.buschbom@statistical-genetics.de
Co-Organizer: Libby Ellwood, iDigBio, ellwoodlibby@gmail.com

Facilitator: Dr. Jutta Buschbom, Statistical Genetics, Ahrensburg, Germany

Conversation Café, Open

Join the SPNHC Biodiversity Crisis Response Committee, and members of conservation committees associated with other societies, in this discussion-oriented session. The goal of this session is to discuss the ways that professional societies, and individuals within them, can best leverage their networks to inform and address conservation research, policy, education, and action. We will follow a Conversation Café model (https://www.liberatingstructures.com/17-conversation-cafe/) that will guide open, respectful, and productive discussion. The outcomes of this session will be focused on making connections and building a network that can support our collective efforts in support of addressing the biodiversity crisis.

Preferred format(s): Conversation Café informal discussion

19) Digitizing Marine Invertebrate Collections: Lessons in Collaboration from DigIn and ESB (closed)

Organizer & Moderator: Alana Rivera, Museum of Comparative Zoology, arivera@oeb.harvard.edu

Symposium, Closed

For two centuries America has amassed unparalleled collections of specimens by exploring the world's oceans. The broadest evolutionary scope of those collections is in the marine invertebrates. However, the majority of the data associated with these specimens exist only on labels enclosed in jars with the preserved animals or in paper logbooks on a shelf, unavailable to the public. NSFs Advancing Digitization of Biodiversity Collections program is currently funding two TCNs featured in this symposium: Documenting Marine Biodiversity through Digitization of Invertebrate Collections (DigIn) and Mobilizing Millions of Marine Mollusks of the Eastern Seaboard (ESB). These projects are digitizing marine invertebrates collections across 33 phyla in collections large and small across the United States.

DigIn and ESB focus on some of the most difficult collections to digitize. Most marine invertebrate specimens are small, preserved in fluid, stored in glass vials with abbreviated or hand written specimen labels, and often are combined in larger containers. The sheer number of marine invertebrate specimens in U.S. collections and their complicated preservation methods have until now hindered data accessibility. The consortium of institutions united by these two projects is not only tackling these onerous digitization challenges, but is also building invertebrate community-centered sustainable best practices that will be shared with the global collections community.

This symposium provides an opportunity to share lessons learned and demonstrates the power of information and resource sharing among our 26 funded partnering institutions. We will highlight technical, educational, and social aspects of building and implementing a network of institutions focused on the digitization of marine invertebrate specimens. Talks in this symposium will cover the development of efficient digitization and imaging workflows, scalable and customizable K-12 teacher education workshops, informal outreach including social media and community science, online and in-person community building, and transparent project organization.

Preferred format(s): Lightning talks, Oral presentations
Keywords: DigIn, ESB, digitization, marine invertebrates, wet collections

~~**20) 'UnNatural History' - Working with Artists and Scientists in Natural History Collections to Understand Biodiversity Loss and Climate Change (closed)**~~ **Canceled**


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