



## Digital Preservation Plan

The Berkeley Natural History Museums (BNHM), University of California, is a consortium of the UC Botanical Garden, Essig Museum of Entomology, UC Museum of Paleontology, Museum of Vertebrate Zoology, Phoebe A. Hearst Museum of Anthropology, University & Jepson Herbaria and the Human Evolutionary Research Center, and collectively are committed to preserving and providing access to born digital and digitally reformatted materials accessioned in its museum collections and archives. In an effort to utilize the most advanced technologies and practices, the BNHM will establish the BNHM Digital Preservation Committee, which is comprised of BNHM Informatics group, and BNHM Archivists.

### Rationale for digital preservation

The BNHM is committed to preserving and providing access to born digital and digitally reformatted materials produced and curated in the museum collections. This plan establishes a workflow for ensuring the authenticity and integrity of the data it aims to preserve. The plan will also outline resources for creating born digital materials with long term preservation in mind. The BNHM will leverage existing resources created by the California Digital Library and the Federal Agencies Digital Guidelines Initiative whenever possible.

Collectively, the BNHM recognize the invaluable research collections held within the museums. So, too, the growing data produced digitally by BNHM researchers must be curated with the same commitment and planning as its specimen collections. Within the framework of the BNHM Informatics group, the BNHM will use this plan to build digital collections to make content available for students, faculty, researchers, and future scholars.

### Mandate

As a public institution, the BNHM are responsible for curating the data produced by the museum for scholarly research.

**Institutional Commitment:** In all the Mission Statements outlined by the individual museums of the BNHM, the institutions articulate a responsibility to document and promote research through their collections. To continue this shared mission, the museums are committed to developing digital access to born digital and digitized content and to preserve the materials for future use.



## Objectives

- Establish the BNHM Digital Preservation Committee
- Provide BNHM personnel with resources on best practices for creating born digital content.
- Execute best practices in preserving media for long term access. This includes but is not limited to storing preservation copies of digitized material at vetted off-site storage facilities and using recommended file formats and technical specifications as described in the Federal Agencies Digital Guidelines Initiative's *Technical Guidelines for Digitizing Cultural Heritage Materials*

## Scope

The BNHM Digital Preservation Committee are responsible for preserving, managing, and making accessible any digital materials deposited or created within the individual museums, separately or jointly.

## Principles

The BNHM Digital Preservation Committee will look to the following guiding principles in determining workflow of managing digital content.

- Aim to serve as the BNHM data archive
- Strive to comply with the ISO 16363 compliant digital repository requirements
- Implement best practices across the BNHM for acquisition of born digital materials
- Continue to create and investigate innovative approaches for providing access to data research materials for interdisciplinary scholarship.

## Roles and Responsibilities

The BNHM have an established informatics program, which has been at the forefront of data management, for example, with its development of VertNet, the implementation of Arctos, a collaborative data management system, and with CollectionSpace, a database collaboration with Lyrasis and UC Berkeley IS&T.

In partnership with BNHM Archivists employed by sister museums, the Informatics group will continue to develop strategies for preserving and providing access to digital research materials. Jointly, the Archivists and Informatics group will meet annually to address future initiatives aimed at digital preservation and access and to review existing workflows for accessioning digital material.



## Selection and Acquisition

In keeping with individual BNHM collecting policies, the Digital Preservation Plan covers digital research materials produced by faculty, students and staff of the BNHM. The collection focus of the BNHMs include material which provide historical, natural history, legal, and sociological context for the museum specimens collections. Specifically, the Archives will accept materials related to museum expeditions, research, and the views of prominent western pioneers, evolutionary biologists, and conservationists affiliated with the museums and their missions.

Digital materials covered by the Digital Preservation Plan include all digital master files and original data.

## Preservation Strategies

The BNHM Digital Preservation Committee resources and strategies are:

- Creation: The committee will use the Federal Agencies Digital Guidelines Initiative's *Technical Guidelines for Digitizing Cultural Heritage Materials* as a framework for best practices in digitizing content and metadata creation.
- Data ingest: To ensure the integrity of files, the committee will look to the ISO 20652: Space Data and Information Transfer Systems - Producer-Archive Interface - Methodology Abstract Standard ([ISO, 2006](#)). ISO 20652 is an international standard that provides a framework and procedures for the formal transfer of digital materials from the creator into the digital preservation environment.
- Storage: Continued offsite storage for master image files and original data are regularly backed up and monitored.

## Collaborations

The BNHM is a collaborative body consisting of the University of California Berkeley natural history museums and collections. The joint effort of the BNHM Informatics group and the BNHM Archivists will establish a committee with resources in diverse professional groups. Other prominent collaborations include:

- UC Berkeley Library
- UC IS&T
- Arctos Database Collection Management Solution
- California Digital Library
- Biodiversity Heritage Library
- Internet Archive
- Texas Advanced Computing Center