

# Strategies for Vertebrate Digitization

## Workshop Agenda



iDigBio, the [Cornell Laboratory of Ornithology](#), [Bishop Museum](#), and [University of Michigan Museum of Zoology](#) are pleased to offer this 3-day workshop focused on the digitization of vertebrate collections, to include the value of live audio and video phenotypic recordings, media metadata standards, media recording techniques (including equipment setup, configuration, and use), methods for linking media to physical specimens, the value of specimen still images, issues in launching a digitization program, digitization workflows, and digital asset management and archiving. Topics to be considered include but are not limited to pre-digitization curation, data acquisition, 2D and 3D imaging, public participation and citizen science, and the use of specimen data in research. This is an all vertebrate taxa workshop, including marine and terrestrial mammals, birds, fishes, reptiles, and amphibians.

**What:** Vertebrate Digitization Workshop.

**When:** 3-7 May 2015 (3 and 7 are travel days).

**Where:** Cornell Laboratory of Ornithology, Ithaca, NY.

**Who:** Vertebrate collections directors, curators, collections managers, domain scientists, and other collections professionals in U.S museums, biological research stations, and academic institutions.

**Planning team:** Molly Hagemann (Bishop Museum), Gil Nelson (iDigBio/Florida State University), Cody Thompson (University of Michigan Museum of Zoology), Mike Webster (Cornell Laboratory of Ornithology, Cornell University).

**May 4, 2015 (Monday)**

<b>Time</b>	<b>Topic/Activity</b>	<b>Responsible</b>
6:30-7:30 a.m.	Breakfast	
7:45 a.m.	Depart hotels	
8:00-8:20 a.m.	Workshop welcome/logistics	Gil Nelson iDigBio/Florida State Mike Webster Cornell Lab
8:20-8:40 a.m.	Overview of iDigBio and ADBC	Larry Page iDigBio Florida Museum of Natural History
8:40-9:00 a.m.	NIBA/ ADBC, NSF directions for vertebrate collections digitization and improvement	Scott Edwards Harvard National Science Foundation
9:00-12:00 p.m.	Field and lab tours and demonstrations (by pre-selection)	Cornell staff
12:00-1:00 p.m.	Lunch (Catered, on-site)	
Getting started with digitization		
1:00-1:20 p.m.	Why digitize vertebrate collections?	Cody Thompson University of Michigan
1:20-1:40 p.m.	Introduction to “media specimens”	Mike Webster Cornell Lab of Ornithology
1:40-2:00 p.m.	Challenges facing small museums with moderate collections and minimal resources	Curtis Schmidt Sternberg Museum of Natural History Fort Hays State U
2:00-2:20 p.m.	Resource challenges for small institutions	Luis Ruedas Portland State U

2:20-2:40 p.m.	Using digital specimens for research	Greg Dietle Paleontology Research Institute Cornell U
2:40-3:00 p.m.	Coffee break	
3:00-3:20 p.m.	Getting started with digitization	Molly Hagemann Bishop Museum
3:20-3:40 p.m.	Data standards	Greg Riccardi iDigBio Florida State U
3:40-4:00 p.m.	Digitizing catalog and ledger data for scientific research	Norma Salcedo Grice Marine Laboratory
4:00-4:20 p.m.	Arctos as a database management system for vertebrate specimens and images	Aren Gunderson U Alaska Museum
4:20-4:40 p.m.	Specify as a database management system for vertebrate specimens and images	Andy Bentley U. Kansas, Biodiversity Institute
4:40-5:00 p.m.	Symbiota as a database management system for vertebrate specimens and images	Ed Gilbert (Remote) Symbiota Arizona State University
5:00-5:30 p.m.	Q&A, Discussion	Gil Nelson/Cody Thompson, moderators

**May 5, 2015 (Tuesday)**

Time	Topic/activity	Responsible
6:30-7:30 a.m.	Breakfast	
7:45 a.m.	Depart hotels	
8:00-11:00 a.m.	Field and lab tours and demonstrations (by pre-selection)	Cornell staff
11:00-11:20 a.m.	Is specimen imaging important in vertebrate digitization?	Molly Hagemann
11:20 a.m.-12:00 p.m.	Q&A; Discussion regarding specimen imaging	Molly Hagemann, moderator
12:00-1:00 p.m.	Lunch (Catered, on-site)	
Acquiring and using images		
1:00-1:20 p.m.	What to database and image?	Molly Hagemann, moderator
1:20-1:40 p.m.	Online measuring	Kevin Nixon Cornell
1:40-2:00 p.m.	Imaging wet collections	Andy Bentley
2:00-2:20 p.m.	Imaging wet collections	Andy Williston Museum of Comparative Zoology, Harvard U
2:20-2:40 p.m.	Imaging birds and mammals	Gil Nelson
2:40-3:00 p.m.	Coffee break	
3:00-3:20 p.m.	Explore your world: Non-invasive high resolution CT in research, outreach, and teaching	Mark Riccio, Cornell U
3:20-3:40 p.m.	CT Scanning of museum specimens in research: a case study	Amy McCune Cornell Museum of Vertebrates Ecology and Evolutionary Biology, Cornell

3:40-4:00 p.m.	Specimen CT imaging/3D modeling at MCZ	Andy Williston
4:00-4:20 p.m.	Vertnet/GBIF	Carla Cicero UC Berkeley Lead PI, Vertnet
4:20-4:40 p.m.	Submitting data to iDigBio	Molly Phillips iDigBio Florida Museum Nat His U Florida
4:40-5:00 p.m.	Global Genomic Biorepositories Network	Jon Coddington Smithsonian
5:00-5:20 p.m.	Daily Q&A, wrap up, and discussion	

#### **May 6, 2015 (Wednesday)**

<b>Time</b>	<b>Topic/activity</b>	<b>Responsible</b>
6:30-7:30 a.m.	Breakfast	
7:45 a.m.	Depart hotels	
8:00-11:00 a.m.	Field and lab demonstrations, tours	Cornell staff
Incorporating citizen science		
11:00-11:20 p.m.	Integration of citizen science activities with research collection databases	Andres Lopez U. Alaska, Fairbanks
11:20-11:40 p.m.	Creative methods for utilizing collections for education and outreach.	Randy Singer UF, Florida Museum of Natural History
11:40-12:00 p.m.	eBird	Steve Kelling Cornell Lab of Ornithology
12:00-12:20 p.m.	Restoring Natural History Collections of Native Amphibians and Reptiles in South Dakota	Gabrielle Maltaverne South Dakota State University

12:20-1:20 p.m.	Lunch (Catered, on-site)	
Acquiring and managing media		
1:20-1:40 p.m.	Introduction to media	Ed Scholes, Cornell U
1:40-2:00 p.m.	Leveraging library resources for storing and curating media (images primarily) associated with specimens	Heather Prestridge Texas A&M University
2:00-2:30 p.m.	Digitizing, managing and future proofing media yourself	Greg Budney Matt Medler Cornell U.
2:30-2:50 p.m.	Co-collection of physical and media specimens: why bother? (Frogs)	Rafe Brown U Kansas
2:50-3:10 p.m.	Coffee break	
3:10-3:30 p.m.	Co-collection of physical and media specimens: why bother? (Fish)	John Sullivan Cornell U.
3:30-3:50 p.m.	Co-collection of physical and media specimens: how to do it, opportunities & challenges	Brett Benz, AMNH
3:50-4:10 p.m.	Round up on media specimens: Q&A, discussion	Ed Scholes
4:10-4:30 p.m.	Workshop wrap up	Molly Hagemann
7:00-9:00 p.m.	Reception Museum of the Earth	